**S1 Table. The papers used in this study to establish the database of the effects of different marketer grazing systems on grassland biomass and soil environments**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | grazing systems | | | |  | biomass | | | | | soil environments | | | | | | | |
| References | Durations | livestock species | grazing season | grazing intensity | Times | AGB | BGB | Root-to-shoot ratio | | total biomass | total nitrogen | total phosphorus | available nitrogen | available phosphorus | organic matter | pH | density | water content |
| 1 | ＞5 years | sheep | the growing season | LG | 3 |  |  |  |  | |  |  | -0.3677 |  |  | 0.0324 |  | 0.0927 |
| 1 | ＞5 years | sheep | the growing season | MG | 3 |  |  |  |  | |  |  | -1.8718 |  |  | 0.0348 |  | -0.0379 |
| 1 | ＞5 years | sheep | the growing season | HG | 3 |  |  |  |  | |  |  | -0.9555 |  |  | 0.0275 |  | -0.1117 |
| 2 | ＞5 years | mixed | annual | EG | 3 |  |  |  |  | | -0.5561 | -0.0292 | -0.168 |  |  | 0.096 | 1.0498 | -0.4143 |
| 2 | ＞5 years | mixed | annual | EG | 3 |  |  |  |  | | -0.7114 | -0.3884 | -0.4778 |  |  | 0.1252 | 1.0826 | -0.4253 |
| 3 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | | 0.3489 | 0.1872 |  |  | 0.252 | -0.01 |  |  |
| 3 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | | 0.0924 | -0.0625 |  |  | -0.1077 | -0.035 |  |  |
| 3 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | | 0.2556 | 0.1625 |  |  | 0.182 | -0.0354 |  |  |
| 3 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | | 0.1769 | 0.087 |  |  | 0.1061 | -0.0143 |  |  |
| 4 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | |  |  |  |  |  |  | 0 |  |
| 4 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | |  |  |  |  |  |  | -0.0163 |  |
| 4 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.016 |  |
| 5 | 2-5 years | sheep | the growing season | EG | 3 | -1.189 | -0.1379 | 1.0511 | -0.5622 | | 0.1427 |  | 0.3217 |  |  |  |  |  |
| 5 | 2-5 years | sheep | the growing season | EG | 3 |  |  |  |  | | 0.2768 |  | 0.7512 |  |  |  |  |  |
| 5 | 2-5 years | cattle | the growing season | EG | 3 | -1.0338 | -0.0233 | 1.0105 | -0.4359 | | 0.1374 |  | -0.3892 |  |  |  |  |  |
| 5 | 2-5 years | cattle | the growing season | EG | 3 |  |  |  |  | | -0.0146 |  | 0.6374 |  |  |  |  |  |
| 5 | 2-5 years | mixed | the growing season | EG | 3 | -1.403 | -0.2195 | 1.1835 | -0.6796 | | 0.1103 |  | 0.4918 |  |  |  |  |  |
| 5 | 2-5 years | mixed | the growing season | EG | 3 |  |  |  |  | | 0.2768 |  | 0.0916 |  |  |  |  |  |
| 6 | 2-5 years | sheep | non-growing season | LG | 3 | 0.1915 |  |  |  | |  |  |  |  |  |  |  |  |
| 6 | 2-5 years | sheep | non-growing season | MG | 3 | 0.2495 |  |  |  | |  |  |  |  |  |  |  |  |
| 6 | 2-5 years | sheep | non-growing season | HG | 3 | 0.0582 |  |  |  | |  |  |  |  |  |  |  |  |
| 7 | 1 year | sheep | the growing season | LG | 3 |  |  |  |  | | 0.4796 |  |  |  | 0.361 | -0.024 | -0.0299 |  |
| 7 | 1 year | sheep | the growing season | LG | 3 |  |  |  |  | | 0 |  |  |  | 0.2056 | -0.0059 | 0.0385 |  |
| 7 | 1 year | sheep | the growing season | LG | 3 |  |  |  |  | | 0.3254 |  |  |  | 0.0047 | -0.0048 | 0.0846 |  |
| 7 | 1 year | sheep | the growing season | LG | 3 |  |  |  |  | | -1.3863 |  |  |  |  |  |  |  |
| 7 | 1 year | sheep | the growing season | LG | 3 |  |  |  |  | | -0.4055 |  |  |  |  |  |  |  |
| 7 | 1 year | sheep | the growing season | LG | 3 |  |  |  |  | | 0.2231 |  |  |  |  |  |  |  |
| 7 | 1 year | sheep | the growing season | LG | 3 |  |  |  |  | | 0.0953 |  |  |  |  |  |  |  |
| 7 | 1 year | sheep | the growing season | LG | 3 |  |  |  |  | | -0.2231 |  |  |  |  |  |  |  |
| 7 | 1 year | sheep | the growing season | LG | 3 |  |  |  |  | | -0.2231 |  |  |  |  |  |  |  |
| 7 | 1 year | sheep | the growing season | MG | 3 |  |  |  |  | | 0.3254 |  |  |  | 0.2879 | -0.0131 | -0.0299 |  |
| 7 | 1 year | sheep | the growing season | MG | 3 |  |  |  |  | | 0.3795 |  |  |  | 0.2006 | -0.0216 | -0.0198 |  |
| 7 | 1 year | sheep | the growing season | MG | 3 |  |  |  |  | | -0.539 |  |  |  |  |  |  |  |
| 7 | 1 year | sheep | the growing season | MG | 3 |  |  |  |  | | -0.4055 |  |  |  |  |  |  |  |
| 7 | 1 year | sheep | the growing season | MG | 3 |  |  |  |  | | -0.1054 |  |  |  |  |  |  |  |
| 7 | 1 year | sheep | the growing season | MG | 3 |  |  |  |  | | -0.3567 |  |  |  |  |  |  |  |
| 8 | ＞5 years | mixed | annual | EG | 3 | -1.7726 |  |  |  | | -0.1796 |  |  |  |  |  |  |  |
| 9 | ＞5 years | sheep | the growing season | LG | 3 | -0.3388 |  |  |  | |  |  |  |  |  |  |  |  |
| 9 | ＞5 years | sheep | the growing season | MG | 3 | -0.5947 |  |  |  | |  |  |  |  |  |  |  |  |
| 9 | ＞5 years | sheep | the growing season | HG | 3 | -0.9395 |  |  |  | |  |  |  |  |  |  |  |  |
| 19 | ＞5 years | sheep | annual | EG | 3 | -0.5419 |  |  |  | |  |  |  |  |  |  |  |  |
| 10 | ＞5 years | sheep | annual | EG | 3 | -1.6734 |  |  |  | |  |  |  |  |  |  |  |  |
| 10 | ＞5 years | sheep | annual | EG | 3 | -1.6545 |  |  |  | |  |  |  |  |  |  |  |  |
| 10 | ＞5 years | sheep | annual | EG | 3 | -1.2522 |  |  |  | |  |  |  |  |  |  |  |  |
| 10 | ＞5 years | sheep | annual | EG | 3 | -1.1819 |  |  |  | |  |  |  |  |  |  |  |  |
| 11 | ＞5 years | mixed | annual | HG | 3 | -2.986 |  |  |  | |  |  |  |  |  |  |  |  |
| 11 | ＞5 years | mixed | the growing season | LG | 3 | -0.3229 |  |  |  | |  |  |  |  |  |  |  |  |
| 11 | ＞5 years | mixed | the growing season | MG | 3 | -0.8156 |  |  |  | |  |  |  |  |  |  |  |  |
| 12 | ＞5 years | mixed | annual | EG | 4 | 0.05 |  |  |  | |  |  |  |  |  | -0.0144 | -0.012 | 0.3194 |
| 12 | ＞5 years | mixed | annual | EG | 4 | 0.1231 |  |  |  | |  |  |  |  |  | -0.0489 | 0 | -0.2231 |
| 12 | ＞5 years | mixed | non-growing season | LG | 4 | -0.2181 |  |  |  | |  |  |  |  |  | 0.0617 | 0.1843 | -0.2114 |
| 12 | ＞5 years | mixed | non-growing season | LG | 4 | 0.225 |  |  |  | |  |  |  |  |  | 0.0314 | 0.3228 | -0.3038 |
| 13 | ＞5 years | sheep | annual | MG | 3 | -0.8009 | -0.1146 | 0.6863 | -0.1806 | |  |  |  |  |  | 0.0348 | -0.2384 |  |
| 14 | 2-5 years | sheep | annual | MG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.1759 | -0.377 |
| 15 | ＞5 years | sheep | annual | MG | 5 | -0.5961 | -0.196 | 0.4002 | -0.2771 | |  |  |  |  |  |  |  |  |
| 15 | ＞5 years | sheep | annual | MG | 5 | -0.5963 | -0.1474 | 0.4489 | -0.2348 | |  |  |  |  |  |  |  |  |
| 15 | ＞5 years | sheep | annual | MG | 5 | -0.5962 | -0.0148 | 0.5814 | -0.1381 | |  |  |  |  |  |  |  |  |
| 16 | 2-5 years | mixed | annual | EG | 5 |  |  |  |  | |  |  |  |  |  |  | 0.4263 |  |
| 16 | 2-5 years | mixed | annual | EG | 5 |  |  |  |  | |  |  |  |  |  |  | 0.0168 |  |
| 16 | 2-5 years | mixed | annual | EG | 5 |  |  |  |  | |  |  |  |  |  |  | 0.0255 |  |
| 16 | ＞5 years | mixed | annual | EG | 5 | -0.9409 | -0.1933 | 0.7476 | -0.2364 | | -0.1523 |  |  |  |  | 0.0142 |  |  |
| 16 | ＞5 years | mixed | annual | EG | 5 | -1.2823 | -0.3373 | 0.945 | -0.3779 | |  |  |  |  |  | 0.0278 |  |  |
| 16 | ＞5 years | mixed | annual | EG | 5 | -1.2455 | -0.2464 | 0.999 | -0.2904 | |  |  |  |  |  | 0.014 |  |  |
| 17 | ＞5 years | mixed | annual | LG | 3 | -0.0732 | -0.0163 | 0.1114 | 0.0295 | | 0.1211 | 0.069 |  |  |  | 0.0069 | 0.0157 | -0.0466 |
| 17 | ＞5 years | mixed | annual | LG | 3 |  | 0.1918 |  |  | | 0.3145 | 0 |  |  |  |  |  |  |
| 17 | ＞5 years | mixed | annual | LG | 3 |  | 0.081 |  |  | | 0.2318 | -0.0445 |  |  |  |  |  |  |
| 17 | ＞5 years | mixed | annual | LG | 3 |  | 0.1661 |  |  | | 0.0588 | 0.0513 |  |  |  |  |  |  |
| 17 | ＞5 years | mixed | annual | LG | 3 |  | 0.0382 |  |  | |  |  |  |  |  |  |  |  |
| 17 | ＞5 years | mixed | annual | MG | 3 | -0.3423 | 0.2543 | 0.5274 | 0.1505 | | 0.1724 | 0 |  |  |  | 0.0239 | 0.0389 | -0.3044 |
| 17 | ＞5 years | mixed | annual | MG | 3 |  | 0.1915 |  |  | | 0.4055 | -0.0426 |  |  |  |  |  |  |
| 17 | ＞5 years | mixed | annual | MG | 3 |  | -0.2975 |  |  | | 0.5534 | 0 |  |  |  |  |  |  |
| 17 | ＞5 years | mixed | annual | MG | 3 |  | -0.1208 |  |  | | 0.1144 | 0.0513 |  |  |  |  |  |  |
| 17 | ＞5 years | mixed | annual | MG | 3 |  | 0.1851 |  |  | |  |  |  |  |  |  |  |  |
| 17 | ＞5 years | mixed | annual | HG | 3 | -0.6481 | 0.0512 | 0.5277 | -0.1549 | | -0.3178 | -0.2877 |  |  |  | 0.0372 | 0.069 | -0.5318 |
| 17 | ＞5 years | mixed | annual | HG | 3 |  | -0.5661 |  |  | | -0.0674 | -0.2336 |  |  |  |  |  |  |
| 17 | ＞5 years | mixed | annual | HG | 3 |  | -0.8021 |  |  | | -0.1566 | -0.4274 |  |  |  |  |  |  |
| 17 | ＞5 years | mixed | annual | HG | 3 |  | -0.8382 |  |  | | -0.0465 | -0.2364 |  |  |  |  |  |  |
| 17 | ＞5 years | mixed | annual | HG | 3 |  | -0.1204 |  |  | |  |  |  |  |  |  |  |  |
| 18 | 1 year | mixed | the growing season | EG | 3 |  |  |  |  | | -0.2379 |  |  |  |  |  |  | 0.3847 |
| 18 | 1 year | mixed | the growing season | EG | 3 |  |  |  |  | | -0.4642 |  |  |  |  |  |  | -0.098 |
| 18 | 1 year | mixed | the growing season | EG | 3 |  |  |  |  | | -0.4064 |  |  |  |  |  |  | -0.0673 |
| 18 | 1 year | mixed | the growing season | EG | 3 |  |  |  |  | | -0.2462 |  |  |  |  |  |  | 0.0746 |
| 18 | 1 year | mixed | the growing season | MG | 3 |  |  |  |  | | -0.1105 |  |  |  |  |  |  | 0.0947 |
| 18 | 1 year | mixed | the growing season | MG | 3 |  |  |  |  | | -0.3 |  |  |  |  |  |  | 0.0488 |
| 18 | 1 year | mixed | the growing season | MG | 3 |  |  |  |  | | -0.2279 |  |  |  |  |  |  | 0.2066 |
| 18 | 1 year | mixed | the growing season | MG | 3 |  |  |  |  | | -0.2503 |  |  |  |  |  |  | 0.2288 |
| 18 | 2-5 years | mixed | annual | EG | 3 |  |  |  |  | | -0.0906 |  |  |  |  |  | -0.0796 | -0.8362 |
| 18 | 2-5 years | mixed | annual | EG | 3 |  |  |  |  | | -0.0885 |  |  |  |  |  | -0.0123 | -0.775 |
| 18 | 2-5 years | mixed | annual | EG | 3 |  |  |  |  | | -0.3718 |  |  |  |  |  | -0.0625 | -0.5151 |
| 18 | 2-5 years | mixed | annual | EG | 3 |  |  |  |  | | 0.0925 |  |  |  |  |  | -0.1268 | 1.1701 |
| 18 | 2-5 years | mixed | annual | EG | 3 |  |  |  |  | | 0.2962 |  |  |  |  |  |  | 1.1728 |
| 18 | 2-5 years | mixed | annual | EG | 3 |  |  |  |  | | 0.3928 |  |  |  |  |  |  | 1.2172 |
| 18 | 2-5 years | mixed | annual | EG | 3 |  |  |  |  | | 0.1466 |  |  |  |  |  |  | 0.3039 |
| 18 | 2-5 years | mixed | the growing season | MG | 3 |  |  |  |  | | 0.1827 |  |  |  |  |  | -0.1252 | 0.7565 |
| 18 | 2-5 years | mixed | the growing season | MG | 3 |  |  |  |  | | 1.0146 |  |  |  |  |  | -0.1163 | 0.9849 |
| 18 | 2-5 years | mixed | the growing season | MG | 3 |  |  |  |  | | 0.7151 |  |  |  |  |  | -0.186 | 0.9552 |
| 18 | 2-5 years | mixed | the growing season | MG | 3 |  |  |  |  | |  |  |  |  |  |  | -0.1268 | 0.5801 |
| 18 | 2-5 years | mixed | annual | MG | 3 |  |  |  |  | | -0.1328 |  |  |  |  |  | -0.1959 | -0.1736 |
| 18 | 2-5 years | mixed | annual | MG | 3 |  |  |  |  | | -0.1834 |  |  |  |  |  | -0.1493 | -0.0783 |
| 18 | 2-5 years | mixed | annual | MG | 3 |  |  |  |  | | -0.2227 |  |  |  |  |  | -0.159 | -0.0803 |
| 18 | 2-5 years | mixed | annual | MG | 3 |  |  |  |  | | -0.3954 |  |  |  |  |  | -0.1251 | 1.3239 |
| 18 | 2-5 years | mixed | annual | MG | 3 |  |  |  |  | | 0.6359 |  |  |  |  |  |  | 1.0357 |
| 18 | 2-5 years | mixed | annual | MG | 3 |  |  |  |  | | 1.2804 |  |  |  |  |  |  | 0.8972 |
| 18 | 2-5 years | mixed | annual | MG | 3 |  |  |  |  | | 1.3289 |  |  |  |  |  |  | 0.4929 |
| 18 | 2-5 years | cattle | non-growing season | LG | 3 |  |  |  |  | |  |  |  |  |  |  | -0.2085 | 1.5883 |
| 18 | 2-5 years | cattle | non-growing season | LG | 3 |  |  |  |  | |  |  |  |  |  |  | -0.2478 | 1.6422 |
| 18 | 2-5 years | cattle | non-growing season | LG | 3 |  |  |  |  | |  |  |  |  |  |  | -0.1715 | 1.1854 |
| 18 | 2-5 years | cattle | non-growing season | LG | 3 |  |  |  |  | |  |  |  |  |  |  | -0.2187 | 0.7153 |
| 19 | 1 year | sheep | the growing season | LG | 3 |  |  |  |  | | -0.2357 | -0.1542 |  |  | -0.4475 |  | -0.0074 | -0.0395 |
| 19 | 1 year | sheep | the growing season | LG | 3 |  |  |  |  | | -0.1365 | -0.1733 |  |  | -0.0049 |  | 0.0807 | -0.2231 |
| 19 | 1 year | sheep | the growing season | LG | 3 |  |  |  |  | | -0.0917 | -0.5773 |  |  | 0.0217 |  | 0.1247 | -0.3687 |
| 19 | 1 year | sheep | the growing season | LG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.087 | 0.0765 |
| 19 | 1 year | sheep | the growing season | MG | 3 |  |  |  |  | | -0.1089 | -0.3365 |  |  | -0.4606 |  | 0.0361 | -0.1911 |
| 19 | 1 year | sheep | the growing season | MG | 3 |  |  |  |  | | -0.1178 | -0.3665 |  |  | -0.2467 |  | 0.0884 | -0.3102 |
| 19 | 1 year | sheep | the growing season | MG | 3 |  |  |  |  | | -0.3262 | -0.1512 |  |  | -0.618 |  | 0.0078 | -0.087 |
| 19 | 1 year | sheep | the growing season | MG | 3 |  |  |  |  | | -0.0362 | -0.3533 |  |  | -0.48 |  | -0.007 | 0.087 |
| 19 | 1 year | sheep | the growing season | MG | 3 |  |  |  |  | | -0.1271 | -0.3342 |  |  | -0.2182 |  | 0.0361 | -0.2201 |
| 19 | 1 year | sheep | the growing season | MG | 3 |  |  |  |  | | -0.3775 | 0.3264 |  |  | -0.9245 |  | 0.1554 | -0.4359 |
| 19 | 1 year | sheep | the growing season | MG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.2356 | -0.418 |
| 19 | 1 year | sheep | the growing season | MG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.0676 | -0.0347 |
| 19 | 1 year | sheep | the growing season | HG | 3 |  |  |  |  | | -0.0399 | -0.7172 |  |  | -0.5946 |  | 0.0572 | -0.2415 |
| 19 | 1 year | sheep | the growing season | HG | 3 |  |  |  |  | | -0.0949 | -0.3665 |  |  | -0.3845 |  | 0.1112 | -0.4055 |
| 19 | 1 year | sheep | the growing season | HG | 3 |  |  |  |  | | -0.312 | 0.0841 |  |  | -1.1278 |  | 0.2719 | -0.1823 |
| 19 | 1 year | sheep | the growing season | HG | 3 |  |  |  |  | | -0.0071 | -0.8199 |  |  | -0.6624 |  | 0.1962 | -0.0585 |
| 19 | 1 year | sheep | the growing season | HG | 3 |  |  |  |  | | 0.0364 | -0.8938 |  |  | -0.4393 |  | 0.0913 | -0.2634 |
| 19 | 1 year | sheep | the growing season | HG | 3 |  |  |  |  | | -0.1559 | 0.1313 |  |  | -0.7461 |  | 0.1837 | -0.4055 |
| 19 | 1 year | sheep | the growing season | HG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.1652 | 0.08 |
| 19 | 1 year | sheep | the growing season | HG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.007 | 0.2231 |
| 20 | 1 year | sheep | the growing season | LG | 3 | -0.1426 | -0.0666 | 0.076 | -0.0695 | |  |  |  |  |  |  |  |  |
| 20 | 1 year | sheep | the growing season | MG | 3 | -0.0013 | -0.1277 | -0.1265 | -0.1226 | |  |  |  |  |  |  |  |  |
| 20 | 1 year | sheep | the growing season | MG | 3 | -0.0756 | -0.1439 | -0.0683 | -0.1411 | |  |  |  |  |  |  |  |  |
| 20 | 1 year | sheep | the growing season | HG | 3 | -0.3987 | -0.2342 | 0.1645 | -0.2401 | |  |  |  |  |  |  |  |  |
| 20 | 1 year | sheep | the growing season | HG | 3 | -0.4937 | -0.335 | 0.1586 | -0.3407 | |  |  |  |  |  |  |  |  |
| 21 | 1 year | sheep | the growing season | LG | 3 | 0.027 |  |  |  | | -0.2013 | 0.5819 |  |  | 0.1133 |  |  | -0.0352 |
| 21 | 1 year | sheep | the growing season | LG | 3 | 0.027 |  |  |  | | -0.2219 | 0 |  |  | 0.0577 |  |  | -0.0228 |
| 21 | 1 year | sheep | the growing season | LG | 3 | 0.027 |  |  |  | |  |  |  |  |  |  |  | 0.0042 |
| 21 | 1 year | sheep | the growing season | MG | 3 | -0.2347 |  |  |  | | -0.1119 | 0.7191 |  |  | 0.1117 |  |  | -0.0817 |
| 21 | 1 year | sheep | the growing season | MG | 3 | -0.2347 |  |  |  | | -0.202 | -0.2151 |  |  | -0.0853 |  |  | -0.057 |
| 21 | 1 year | sheep | the growing season | MG | 3 | -0.2347 |  |  |  | |  |  |  |  |  |  |  | 0.0256 |
| 21 | 1 year | sheep | the growing season | HG | 3 | -0.4165 |  |  |  | | -0.0752 | 0.1466 |  |  | 0.0752 |  |  | -0.0961 |
| 21 | 1 year | sheep | the growing season | HG | 3 | -0.4165 |  |  |  | | -0.1199 | -0.3895 |  |  | -0.1528 |  |  | -0.0789 |
| 21 | 1 year | sheep | the growing season | HG | 3 | -0.4165 |  |  |  | |  |  |  |  |  |  |  | 0.0418 |
| 22 | ＞5 years | mixed | annual | LG | 3 | -0.1188 |  |  |  | | 0.147 |  |  |  |  |  |  |  |
| 22 | ＞5 years | mixed | annual | LG | 3 |  |  |  |  | | 0.0674 |  |  |  |  |  |  |  |
| 22 | ＞5 years | mixed | annual | LG | 3 |  |  |  |  | | 0.042 |  |  |  |  |  |  |  |
| 22 | ＞5 years | mixed | annual | LG | 3 |  |  |  |  | | 0.0889 |  |  |  |  |  |  |  |
| 22 | ＞5 years | mixed | annual | LG | 3 |  |  |  |  | | 0.0953 |  |  |  |  |  |  |  |
| 22 | ＞5 years | mixed | annual | MG | 3 | -0.3544 |  |  |  | | 0.1542 |  |  |  |  |  |  |  |
| 22 | ＞5 years | mixed | annual | MG | 3 |  |  |  |  | | 0.0783 |  |  |  |  |  |  |  |
| 22 | ＞5 years | mixed | annual | MG | 3 |  |  |  |  | | 0.069 |  |  |  |  |  |  |  |
| 22 | ＞5 years | mixed | annual | MG | 3 |  |  |  |  | | 0.1706 |  |  |  |  |  |  |  |
| 22 | ＞5 years | mixed | annual | MG | 3 |  |  |  |  | | 0.1178 |  |  |  |  |  |  |  |
| 22 | ＞5 years | mixed | annual | HG | 3 | -0.933 |  |  |  | | -0.0426 |  |  |  |  |  |  |  |
| 22 | ＞5 years | mixed | annual | HG | 3 |  |  |  |  | | 0.0455 |  |  |  |  |  |  |  |
| 22 | ＞5 years | mixed | annual | HG | 3 |  |  |  |  | | 0 |  |  |  |  |  |  |  |
| 22 | ＞5 years | mixed | annual | HG | 3 |  |  |  |  | | 0.0674 |  |  |  |  |  |  |  |
| 22 | ＞5 years | mixed | annual | HG | 3 |  |  |  |  | | 0 |  |  |  |  |  |  |  |
| 23 | 1 year | cattle | the growing season | LG | 3 | -0.2885 | -0.2041 | 0.0844 | -0.2558 | | -0.149 | 0.0619 | -0.1198 | -0.1625 |  | 0.0286 | 0.0213 | -0.1043 |
| 23 | 1 year | cattle | the growing season | LG | 3 |  |  |  |  | | -0.2348 | 0.0522 | -0.2403 | -0.0299 |  |  |  |  |
| 23 | 1 year | cattle | the growing season | LG | 3 |  |  |  |  | | -0.2556 | 0.1603 | -0.0859 | -0.1612 |  |  |  |  |
| 23 | 1 year | cattle | the growing season | LG | 3 |  |  |  |  | | 0.1178 | -0.1027 | -0.0215 | -0.1981 |  |  |  |  |
| 23 | 1 year | cattle | the growing season | MG | 3 | -0.3665 | -0.2942 | 0.0723 | -0.3386 | | -0.0051 | -0.066 | -0.0829 | 0.0466 |  | 0.042 | 0.0447 | -0.1728 |
| 23 | 1 year | cattle | the growing season | MG | 3 |  |  |  |  | | 0.041 | -0.018 | -0.0949 | -0.0652 |  |  |  |  |
| 23 | 1 year | cattle | the growing season | MG | 3 |  |  |  |  | | -0.0479 | -0.091 | -0.1307 | -0.2371 |  |  |  |  |
| 23 | 1 year | cattle | the growing season | MG | 3 |  |  |  |  | | -0.0074 | -0.1582 | -0.0084 | -0.1981 |  |  |  |  |
| 23 | 1 year | cattle | the growing season | HG | 3 | -0.427 | -0.4766 | -0.0495 | -0.4454 | | -0.026 | -0.1866 | -0.1236 | 0.0045 |  | 0.0624 | 0.0826 | -0.2706 |
| 23 | 1 year | cattle | the growing season | HG | 3 |  |  |  |  | | -0.0874 | -0.0935 | -0.1434 | -0.1769 |  |  |  |  |
| 23 | 1 year | cattle | the growing season | HG | 3 |  |  |  |  | | -0.1173 | -0.2177 | -0.2159 | -0.1638 |  |  |  |  |
| 23 | 1 year | cattle | the growing season | HG | 3 |  |  |  |  | | 0.1993 | -0.3814 |  | -0.1981 |  |  |  |  |
| 24 | 2-5 years | sheep | annual | EG | 3 | -1.0025 |  |  |  | |  |  |  |  |  |  |  | -0.163 |
| 24 | 2-5 years | sheep | non-growing season | MG | 3 | -0.6148 |  |  |  | |  |  |  |  |  |  |  | -0.0598 |
| 25 | 1 year | sheep | the growing season | LG | 3 | -0.1634 |  |  |  | |  |  |  |  |  |  | 0.014 | -0.0417 |
| 25 | 1 year | sheep | the growing season | LG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.0441 | -0.0827 |
| 25 | 1 year | sheep | the growing season | LG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.0374 | -0.0306 |
| 25 | 1 year | sheep | the growing season | MG | 3 | -0.8993 |  |  |  | |  |  |  |  |  |  | 0.039 | -0.0469 |
| 25 | 1 year | sheep | the growing season | MG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.0464 | -0.2792 |
| 25 | 1 year | sheep | the growing season | MG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.0413 | 0.2844 |
| 25 | 1 year | sheep | the growing season | HG | 3 | -1.9949 |  |  |  | |  |  |  |  |  |  | 0.0603 | -0.1115 |
| 25 | 1 year | sheep | the growing season | HG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.0558 | -0.4773 |
| 25 | 1 year | sheep | the growing season | HG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.0475 | 0.3267 |
| 26 | 2-5 years | cattle | the growing season | LG | 3 | -0.5195 | 0.0502 | 0.5697 | 0.0355 | | -0.1025 | -0.0753 | -0.1143 | -0.0794 | -0.3157 | 0.0043 | -0.0944 | -0.0128 |
| 26 | 2-5 years | cattle | the growing season | LG | 3 | -0.702 | 0.1812 | 0.8832 | 0.1613 | | -0.0253 | -0.0157 | 0.0166 | -0.072 | -0.1927 | -0.0037 | -0.0509 | -0.0257 |
| 26 | 2-5 years | cattle | the growing season | LG | 3 |  |  |  |  | | 0.037 | 0.0548 | -0.1248 | -0.0336 | -0.2763 | -0.0083 | -0.1345 | 0.1302 |
| 26 | 2-5 years | cattle | the growing season | LG | 3 |  |  |  |  | | -0.0783 | -0.0051 | -0.0856 | -0.022 | -0.1286 | 0.0005 | 0.0138 | -0.0127 |
| 26 | 2-5 years | cattle | the growing season | LG | 3 |  |  |  |  | | -0.1184 | 0.142 | -0.0674 | 0.0382 | -0.1234 | -0.0235 | -0.0523 | -0.0592 |
| 26 | 2-5 years | cattle | the growing season | LG | 3 |  |  |  |  | | -0.0924 | 0.092 | 0.0073 | 0.297 | -0.2555 | -0.0137 | 0.164 | -0.04 |
| 26 | 2-5 years | cattle | the growing season | HG | 3 | -0.4481 | -0.156 | 0.2921 | -0.1645 | | -0.4628 | -0.052 | -0.1387 | -0.0068 | -0.3559 | -0.0151 | -0.0959 | 0.0516 |
| 26 | 2-5 years | cattle | the growing season | HG | 3 | -0.9844 | 0.1252 | 1.1096 | 0.1025 | | -0.1982 | -0.1256 | -0.3358 | 0.0721 | -0.4033 | -0.0178 | -0.2031 | -0.197 |
| 26 | 2-5 years | cattle | the growing season | HG | 3 |  |  |  |  | | -0.4022 | 0.03 | 0 | -0.0858 | -0.3041 | 0.0041 | -0.051 | -0.1948 |
| 26 | 2-5 years | cattle | the growing season | HG | 3 |  |  |  |  | | -0.4292 | -0.1164 | -0.1734 | 0.0426 | -0.2534 | -0.0036 | 0.0523 | -0.0736 |
| 26 | 2-5 years | cattle | the growing season | HG | 3 |  |  |  |  | | 0.0587 | 0.092 | -0.0655 | -0.0969 | -0.2041 | -0.0245 | -0.0102 | -0.1237 |
| 26 | 2-5 years | cattle | the growing season | HG | 3 |  |  |  |  | | -0.515 | 0.0869 | -0.1503 | 0.1875 | -0.3455 | -0.0101 | 0.004 | -0.1461 |
| 27 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.0144 |  |
| 27 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.1214 |  |
| 27 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.0286 |  |
| 27 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.1355 |  |
| 27 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.0215 |  |
| 27 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.1285 |  |
| 27 | 2-5 years | sheep | the growing season | EG | 3 |  |  |  |  | |  |  |  |  |  |  | 0 |  |
| 27 | 2-5 years | sheep | the growing season | EG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.107 |  |
| 27 | ＞5 years | sheep | the growing season | LG | 3 |  |  |  |  | | -0.0361 | 0 | -0.257 |  | -0.0942 | -0.0104 |  |  |
| 27 | ＞5 years | sheep | the growing season | LG | 3 |  |  |  |  | | -0.1933 | -0.0606 | -0.5238 |  | -0.1879 | 0.0039 |  |  |
| 27 | ＞5 years | sheep | the growing season | MG | 3 |  |  |  |  | | -0.0288 | 0 | -0.2238 |  | -0.065 | 0.0065 |  |  |
| 27 | ＞5 years | sheep | the growing season | MG | 3 |  |  |  |  | | -0.186 | -0.0606 | -0.4905 |  | -0.1587 | 0.0208 |  |  |
| 27 | ＞5 years | sheep | the growing season | HG | 3 |  |  |  |  | | -0.0288 | 0.0606 | -0.4032 |  | -0.0957 | 0.0129 |  |  |
| 27 | ＞5 years | sheep | the growing season | HG | 3 |  |  |  |  | | -0.186 | 0 | -0.67 |  | -0.1894 | 0.0272 |  |  |
| 27 | ＞5 years | sheep | the growing season | EG | 3 |  |  |  |  | | 0 | -0.0984 | 0.0003 |  | -0.0591 | -0.0052 |  |  |
| 27 | ＞5 years | sheep | the growing season | EG | 3 |  |  |  |  | | -0.1572 | -0.1591 | -0.2664 |  | -0.1528 | 0.0092 |  |  |
| 28 | ＞5 years | mixed | annual | LG | 3 | -0.3694 |  |  |  | |  |  |  |  |  |  |  |  |
| 28 | ＞5 years | mixed | annual | MG | 3 | -0.8088 |  |  |  | |  |  |  |  |  |  |  |  |
| 28 | ＞5 years | mixed | annual | HG | 3 | -1.313 |  |  |  | |  |  |  |  |  |  |  |  |
| 29 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.0715 |  |
| 29 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.0294 |  |
| 29 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.0072 |  |
| 29 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | |  |  |  |  |  |  | -0.0073 |  |
| 29 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.1054 |  |
| 29 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.0858 |  |
| 29 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.0286 |  |
| 29 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.0144 |  |
| 29 | ＞5 years | sheep | the growing season | MG | 3 |  |  |  |  | | -0.0741 | 0.1703 | 0.1507 | -0.0118 |  |  |  | -0.1948 |
| 29 | ＞5 years | sheep | the growing season | MG | 3 |  |  |  |  | | 0 | -0.1957 | 0.0734 | -0.2788 |  |  |  | -0.1114 |
| 29 | ＞5 years | sheep | the growing season | MG | 3 |  |  |  |  | | 0.087 | 0.08 | -0.112 | 0.5501 |  |  |  | -0.1368 |
| 29 | ＞5 years | sheep | the growing season | MG | 3 |  |  |  |  | | -0.0741 | -0.3429 | 0.1583 | -0.2684 |  |  |  | -0.3165 |
| 29 | ＞5 years | sheep | the growing season | HG | 3 |  |  |  |  | | 0.069 | -0.5108 | 0.2178 | -0.155 |  |  |  | -0.3912 |
| 29 | ＞5 years | sheep | the growing season | HG | 3 |  |  |  |  | | 0.1542 | -0.2231 | -0.0164 | 0.2154 |  |  |  | -0.5071 |
| 29 | ＞5 years | sheep | the growing season | HG | 3 |  |  |  |  | | 0.087 | 0.3285 | -0.0811 | 0.9675 |  |  |  | -0.2826 |
| 29 | ＞5 years | sheep | the growing season | HG | 3 |  |  |  |  | | 0.1335 | -0.1759 | 0.2597 | 0.1116 |  |  |  | -0.0204 |
| 30 | 2-5 years | cattle | annual | LG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.0839 |  |
| 30 | 2-5 years | cattle | annual | LG | 3 |  |  |  |  | |  |  |  |  |  |  | -0.2134 |  |
| 30 | 2-5 years | cattle | annual | LG | 3 |  |  |  |  | |  |  |  |  |  |  | -0.285 |  |
| 30 | 2-5 years | cattle | annual | LG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.3018 |  |
| 30 | 2-5 years | cattle | annual | LG | 3 |  |  |  |  | |  |  |  |  |  |  | -0.2086 |  |
| 30 | 2-5 years | cattle | annual | LG | 3 |  |  |  |  | |  |  |  |  |  |  | -0.007 |  |
| 30 | 2-5 years | cattle | annual | LG | 3 |  |  |  |  | |  |  |  |  |  |  | -0.0381 |  |
| 30 | 2-5 years | cattle | annual | LG | 3 |  |  |  |  | |  |  |  |  |  |  | -0.1577 |  |
| 30 | 2-5 years | cattle | annual | LG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.2145 |  |
| 30 | 2-5 years | cattle | annual | MG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.1284 |  |
| 30 | 2-5 years | cattle | annual | MG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.0775 |  |
| 30 | 2-5 years | cattle | annual | MG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.1466 |  |
| 30 | 2-5 years | cattle | annual | MG | 3 |  |  |  |  | |  |  |  |  |  |  | -0.0117 |  |
| 30 | 2-5 years | cattle | annual | MG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.0391 |  |
| 30 | 2-5 years | cattle | annual | MG | 3 |  |  |  |  | |  |  |  |  |  |  | -0.0459 |  |
| 30 | 2-5 years | cattle | annual | MG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.6703 |  |
| 30 | 2-5 years | cattle | annual | MG | 3 |  |  |  |  | |  |  |  |  |  |  | -0.6063 |  |
| 30 | 2-5 years | cattle | annual | MG | 3 |  |  |  |  | |  |  |  |  |  |  | -0.4261 |  |
| 30 | 2-5 years | cattle | annual | HG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.0597 |  |
| 30 | 2-5 years | cattle | annual | HG | 3 |  |  |  |  | |  |  |  |  |  |  | -0.0909 |  |
| 30 | 2-5 years | cattle | annual | HG | 3 |  |  |  |  | |  |  |  |  |  |  | -0.0546 |  |
| 30 | 2-5 years | cattle | annual | HG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.1189 |  |
| 30 | 2-5 years | cattle | annual | HG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.077 |  |
| 30 | 2-5 years | cattle | annual | HG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.0153 |  |
| 30 | 2-5 years | cattle | annual | HG | 3 |  |  |  |  | |  |  |  |  |  |  | -0.12 |  |
| 30 | 2-5 years | cattle | annual | HG | 3 |  |  |  |  | |  |  |  |  |  |  | -0.775 |  |
| 30 | 2-5 years | cattle | annual | HG | 3 |  |  |  |  | |  |  |  |  |  |  | -0.4135 |  |
| 30 | ＞5 years | cattle | annual | LG | 3 |  | -0.3597 |  |  | |  |  |  |  |  |  |  | -0.017 |
| 30 | ＞5 years | cattle | annual | LG | 3 |  | 0.211 |  |  | |  |  |  |  |  |  |  | 0.0148 |
| 30 | ＞5 years | cattle | annual | LG | 3 |  | -0.0772 |  |  | |  |  |  |  |  |  |  | 0.1997 |
| 30 | ＞5 years | cattle | annual | LG | 3 |  | -0.1569 |  |  | |  |  |  |  |  |  |  | -0.1134 |
| 30 | ＞5 years | cattle | annual | LG | 3 |  | -0.2042 |  |  | |  |  |  |  |  |  |  | 0.292 |
| 30 | ＞5 years | cattle | annual | LG | 3 |  | -0.2147 |  |  | |  |  |  |  |  |  |  | -0.203 |
| 30 | ＞5 years | cattle | annual | LG | 3 |  | -0.057 |  |  | |  |  |  |  |  |  |  | 0.0462 |
| 30 | ＞5 years | cattle | annual | LG | 3 |  | 0.0188 |  |  | |  |  |  |  |  |  |  | 0.0818 |
| 30 | ＞5 years | cattle | annual | LG | 3 |  | 0.208 |  |  | |  |  |  |  |  |  |  | 0.489 |
| 30 | ＞5 years | cattle | annual | LG | 3 |  | -0.057 |  |  | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | annual | LG | 3 |  | 0.0188 |  |  | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | annual | LG | 3 |  | 0.208 |  |  | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | annual | LG | 3 |  | -0.1144 |  |  | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | annual | LG | 3 |  | -0.0409 |  |  | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | annual | LG | 3 |  | 0.2623 |  |  | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | annual | LG | 3 |  | -0.1144 |  |  | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | annual | LG | 3 |  | -0.0409 |  |  | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | annual | LG | 3 |  | 0.2623 |  |  | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | annual | MG | 3 |  | 0.1054 |  |  | |  |  |  |  |  |  |  | -0.0505 |
| 30 | ＞5 years | cattle | annual | MG | 3 |  | 0.0299 |  |  | |  |  |  |  |  |  |  | -0.0309 |
| 30 | ＞5 years | cattle | annual | MG | 3 |  | 0.2297 |  |  | |  |  |  |  |  |  |  | -0.1083 |
| 30 | ＞5 years | cattle | annual | MG | 3 |  | -0.2177 |  |  | |  |  |  |  |  |  |  | 0.0922 |
| 30 | ＞5 years | cattle | annual | MG | 3 |  | -0.042 |  |  | |  |  |  |  |  |  |  | -0.1559 |
| 30 | ＞5 years | cattle | annual | MG | 3 |  | -0.1216 |  |  | |  |  |  |  |  |  |  | 0.009 |
| 30 | ＞5 years | cattle | annual | MG | 3 |  | -0.017 |  |  | |  |  |  |  |  |  |  | -0.0998 |
| 30 | ＞5 years | cattle | annual | MG | 3 |  | 0.5386 |  |  | |  |  |  |  |  |  |  | -0.0681 |
| 30 | ＞5 years | cattle | annual | MG | 3 |  | -0.2606 |  |  | |  |  |  |  |  |  |  | 0.1184 |
| 30 | ＞5 years | cattle | annual | MG | 3 |  | 0.0183 |  |  | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | annual | MG | 3 |  | -0.2417 |  |  | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | annual | MG | 3 |  | -0.1474 |  |  | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | annual | MG | 3 |  | -0.3793 |  |  | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | annual | MG | 3 |  | -0.1235 |  |  | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | annual | MG | 3 |  | -0.1998 |  |  | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | annual | MG | 3 |  | 0.0128 |  |  | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | annual | MG | 3 |  | -0.3082 |  |  | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | annual | MG | 3 |  | -0.164 |  |  | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | annual | HG | 3 |  | 0.3546 |  |  | |  |  |  |  |  |  |  | -0.1088 |
| 30 | ＞5 years | cattle | annual | HG | 3 |  | -0.027 |  |  | |  |  |  |  |  |  |  | -0.058 |
| 30 | ＞5 years | cattle | annual | HG | 3 |  | 0.3737 |  |  | |  |  |  |  |  |  |  | -0.033 |
| 30 | ＞5 years | cattle | annual | HG | 3 |  | 0.1657 |  |  | |  |  |  |  |  |  |  | -0.0905 |
| 30 | ＞5 years | cattle | annual | HG | 3 |  | 0.356 |  |  | |  |  |  |  |  |  |  | -0.1353 |
| 30 | ＞5 years | cattle | annual | HG | 3 |  | 0.0108 |  |  | |  |  |  |  |  |  |  | -0.331 |
| 30 | ＞5 years | cattle | annual | HG | 3 |  | -0.0681 |  |  | |  |  |  |  |  |  |  | 0.0777 |
| 30 | ＞5 years | cattle | annual | HG | 3 |  | -0.0637 |  |  | |  |  |  |  |  |  |  | 0.0588 |
| 30 | ＞5 years | cattle | annual | HG | 3 |  | 0.2014 |  |  | |  |  |  |  |  |  |  | 0.1043 |
| 30 | ＞5 years | cattle | annual | HG | 3 |  | 0.1477 |  |  | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | annual | HG | 3 |  | 0.1267 |  |  | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | annual | HG | 3 |  | 0.3596 |  |  | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | annual | HG | 3 |  | -0.0088 |  |  | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | annual | HG | 3 |  | -0.5115 |  |  | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | annual | HG | 3 |  | 0.0139 |  |  | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | annual | HG | 3 |  | 0.1296 |  |  | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | annual | HG | 3 |  | 0.167 |  |  | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | annual | HG | 3 |  | 0.1761 |  |  | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | the growing season | LG | 3 | -0.2812 | -0.2788 | 0.0024 | -0.2796 | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | the growing season | LG | 3 | -0.8248 | -0.1689 | 0.6559 | -0.2676 | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | the growing season | LG | 3 | 0.0787 | -0.0302 | -0.1089 | -0.0007 | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | the growing season | LG | 3 | -0.2269 | -0.0302 | 0.1968 | -0.0561 | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | the growing season | LG | 3 | -0.0363 | -0.0625 | -0.0262 | -0.0579 | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | the growing season | LG | 3 | -0.23 | -0.0625 | 0.1675 | -0.0881 | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | the growing season | MG | 3 | -0.1372 | 0.105 | 0.2422 | 0.0329 | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | the growing season | MG | 3 | -0.7335 | -0.1728 | 0.5607 | -0.2391 | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | the growing season | MG | 3 | -0.0738 | 0.0342 | 0.108 | 0.0174 | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | the growing season | MG | 3 | -0.2802 | -0.0358 | 0.2444 | -0.061 | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | the growing season | MG | 3 | -0.1192 | -0.3257 | -0.2066 | -0.3077 | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | the growing season | MG | 3 | 0.0198 | -0.0548 | -0.0746 | -0.0442 | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | the growing season | HG | 3 | -0.1949 | 0.2985 | 0.4934 | 0.1566 | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | the growing season | HG | 3 | -1.1502 | 0.1853 | 1.3355 | 0.0159 | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | the growing season | HG | 3 | -0.4498 | -0.0458 | 0.404 | -0.1172 | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | the growing season | HG | 3 | -0.4126 | 0.1623 | 0.5749 | 0.1162 | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | the growing season | HG | 3 | -0.1886 | -0.106 | 0.0826 | -0.115 | |  |  |  |  |  |  |  |  |
| 30 | ＞5 years | cattle | the growing season | HG | 3 | -0.2211 | 0.1404 | 0.3615 | 0.0889 | |  |  |  |  |  |  |  |  |
| 31 | ＞5 years | mixed | annual | LG | 3 | -0.1188 |  |  |  | |  |  |  |  |  |  |  |  |
| 31 | ＞5 years | mixed | annual | MG | 3 | -0.3544 |  |  |  | |  |  |  |  |  |  |  |  |
| 31 | ＞5 years | mixed | annual | HG | 3 | -0.933 |  |  |  | |  |  |  |  |  |  |  |  |
| 32 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.0072 | -0.0418 |
| 32 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.0353 | -0.2773 |
| 32 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | |  |  |  |  |  |  | 0 | -0.0094 |
| 32 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.0426 | -0.1384 |
| 32 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.109 | -0.252 |
| 32 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.0741 | 0.0007 |
| 32 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.07 | -0.4228 |
| 32 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.0695 | -0.3003 |
| 32 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.0478 | -0.1079 |
| 33 | 1 year | sheep | the growing season | MG | 3 |  | -0.439 |  |  | |  |  |  |  |  |  |  |  |
| 33 | 1 year | sheep | the growing season | MG | 3 |  | 0.5662 |  |  | |  |  |  |  |  |  |  |  |
| 33 | 1 year | sheep | the growing season | MG | 3 |  | 0.1147 |  |  | |  |  |  |  |  |  |  |  |
| 33 | 1 year | sheep | the growing season | MG | 3 |  | 0.4362 |  |  | |  |  |  |  |  |  |  |  |
| 33 | 1 year | sheep | the growing season | MG | 3 |  | 0.9349 |  |  | |  |  |  |  |  |  |  |  |
| 33 | 1 year | sheep | the growing season | MG | 3 |  | 0.7408 |  |  | |  |  |  |  |  |  |  |  |
| 33 | 1 year | sheep | the growing season | MG | 3 |  | 0.3027 |  |  | |  |  |  |  |  |  |  |  |
| 33 | 1 year | sheep | the growing season | MG | 3 |  | 0.7848 |  |  | |  |  |  |  |  |  |  |  |
| 33 | 1 year | sheep | the growing season | MG | 3 |  | 0.6333 |  |  | |  |  |  |  |  |  |  |  |
| 34 | ＞5 years | mixed | annual | LG | 3 | -0.1188 | 0.308 | 0.4049 | 0.2223 | |  |  |  |  |  |  |  |  |
| 34 | ＞5 years | mixed | annual | LG | 3 |  | 0.3355 |  |  | |  |  |  |  |  |  |  |  |
| 34 | ＞5 years | mixed | annual | LG | 3 |  | 0.0894 |  |  | |  |  |  |  |  |  |  |  |
| 34 | ＞5 years | mixed | annual | LG | 3 |  | 0.3387 |  |  | |  |  |  |  |  |  |  |  |
| 34 | ＞5 years | mixed | annual | LG | 3 |  | 0.286 |  |  | |  |  |  |  |  |  |  |  |
| 34 | ＞5 years | mixed | annual | MG | 3 | -0.3544 | -0.049 | 0.1417 | -0.2375 | |  |  |  |  |  |  |  |  |
| 34 | ＞5 years | mixed | annual | MG | 3 |  | -0.3667 |  |  | |  |  |  |  |  |  |  |  |
| 34 | ＞5 years | mixed | annual | MG | 3 |  | -0.1749 |  |  | |  |  |  |  |  |  |  |  |
| 34 | ＞5 years | mixed | annual | MG | 3 |  | -1.0327 |  |  | |  |  |  |  |  |  |  |  |
| 34 | ＞5 years | mixed | annual | MG | 3 |  | -0.2128 |  |  | |  |  |  |  |  |  |  |  |
| 34 | ＞5 years | mixed | annual | HG | 3 | -0.933 | -0.3152 | 0.5555 | -0.4598 | |  |  |  |  |  |  |  |  |
| 34 | ＞5 years | mixed | annual | HG | 3 |  | -0.353 |  |  | |  |  |  |  |  |  |  |  |
| 34 | ＞5 years | mixed | annual | HG | 3 |  | -0.4934 |  |  | |  |  |  |  |  |  |  |  |
| 34 | ＞5 years | mixed | annual | HG | 3 |  | -0.6294 |  |  | |  |  |  |  |  |  |  |  |
| 34 | ＞5 years | mixed | annual | HG | 3 |  | -0.3775 |  |  | |  |  |  |  |  |  |  |  |
| 35 | ＞5 years | mixed | annual | LG | 3 | -0.1645 |  |  |  | |  |  |  |  |  |  |  |  |
| 35 | ＞5 years | mixed | annual | MG | 3 | -1 |  |  |  | |  |  |  |  |  |  |  |  |
| 35 | ＞5 years | mixed | annual | HG | 3 | -1.5268 |  |  |  | |  |  |  |  |  |  |  |  |
| 40 | ＞5 years | sheep | annual | MG | 3 | -1.2824 |  |  |  | | -0.2541 | -0.5222 | -0.242 | -1.4433 |  | 0.1834 |  | -0.565 |
| 40 | ＞5 years | sheep | annual | MG | 3 |  |  |  |  | | -0.3518 | -0.0343 | -0.3392 | -1.4241 |  | 0.0251 |  | -0.7306 |
| 40 | ＞5 years | sheep | annual | MG | 3 |  |  |  |  | | -0.3517 | -0.4904 | -0.2369 | -0.6491 |  | 0.1405 |  | -0.383 |
| 40 | ＞5 years | sheep | annual | MG | 3 |  |  |  |  | | -0.3125 | -0.3841 | -0.4667 | -0.7787 |  | -0.5103 |  | -0.1513 |
| 40 | ＞5 years | sheep | the growing season | MG | 3 | -0.8984 |  |  |  | | 0.0491 | -0.0593 | 0.0272 | -0.4987 |  | -0.0387 |  | -0.0355 |
| 40 | ＞5 years | sheep | the growing season | MG | 3 |  |  |  |  | | 0.0006 | 0.1421 | -0.0676 | -0.3488 |  | -0.0627 |  | -0.2126 |
| 40 | ＞5 years | sheep | the growing season | MG | 3 |  |  |  |  | | -0.2153 | -0.1293 | 0.0142 | -0.0579 |  | 0.0997 |  | 0.0193 |
| 40 | ＞5 years | sheep | the growing season | MG | 3 |  |  |  |  | | 0.0993 | -0.0848 | -0.0819 | -0.609 |  | -0.1972 |  | -0.0416 |
| 41 | ＞5 years | sheep | the growing season | MG | 3 | -0.6733 | -0.0232 | 0.3871 | -0.091 | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.5327 | -1.0405 | -0.4493 | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | 0.2422 | -0.2353 | -0.1526 | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.8922 | -0.2331 | -0.7352 | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.2891 | -0.8464 | -0.1348 | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.3695 | 1.4196 | -0.2974 | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.1039 |  |  | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.4561 |  |  | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.617 |  |  | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.4678 |  |  | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | 0.0605 |  |  | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.2122 |  |  | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.376 |  |  | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.1139 |  |  | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.8585 |  |  | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.6117 |  |  | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | 0.1641 |  |  | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.1443 |  |  | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 | -0.3708 | -0.3185 | -0.0186 | -0.2857 | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.2423 | 0.0537 | -0.1807 | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | 0.4922 | 0.965 | 0.351 | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.2912 | 0.2657 | -0.0987 | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.3097 | 0.47 | -0.1333 | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.3006 | 0.2809 | -0.2363 | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.3613 |  |  | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.2331 |  |  | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | 0.2792 |  |  | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | 0.1502 |  |  | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.0623 |  |  | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.2463 |  |  | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.0487 |  |  | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | 0.1806 |  |  | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | 0.1256 |  |  | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | 0.1553 |  |  | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | 0.4449 |  |  | |  |  |  |  |  |  |  |  |
| 41 | ＞5 years | sheep | the growing season | MG | 3 |  | 0.0041 |  |  | |  |  |  |  |  |  |  |  |
| 42 | ＞5 years | sheep | annual | EG | 3 |  |  |  |  | |  | -0.5596 |  | -0.43 |  |  |  | -0.1457 |
| 42 | ＞5 years | sheep | annual | HG | 3 |  |  |  |  | |  | -0.6466 |  | -0.3354 |  |  |  | -0.0702 |
| 43 | ＞5 years | mixed | annual | EG | 3 |  | 0.1873 | -0.2926 | 0.4 | |  |  |  |  |  |  |  |  |
| 44 | ＞5 years | mixed | annual | HG | 3 | -0.797 |  |  |  | |  |  |  |  |  |  |  |  |
| 44 | ＞5 years | mixed | non-growing season | LG | 3 | -0.2886 |  |  |  | |  |  |  |  |  |  |  |  |
| 45 | 2-5 years | sheep | annual | EG | 3 | -2.0816 | 0.2963 | 2.3779 | -1.6278 | |  |  |  |  |  |  |  |  |
| 45 | 2-5 years | sheep | annual | EG | 3 | -2.0206 | 0.619 | 2.6397 | -1.5532 | |  |  |  |  |  |  |  |  |
| 46 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | | -0.0377 | 0 |  |  |  |  |  |  |
| 46 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | |  |  |  |  |  |  |  |  |
| 46 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | | -0.0506 | 0 |  |  |  |  |  |  |
| 46 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | | -0.0637 | -0.077 |  |  |  |  |  |  |
| 47 | 2-5 years | sheep | the growing season | MG | 3 | 0.5135 | 0.0731 | -1.3411 | -0.2233 | |  |  |  |  |  |  | -0.0286 | -0.5812 |
| 47 | 2-5 years | sheep | the growing season | MG | 3 |  | -1.1657 |  |  | |  |  |  |  |  |  | 0.0697 | -1.2967 |
| 47 | 2-5 years | sheep | the growing season | MG | 3 |  | -0.9102 |  |  | |  |  |  |  |  |  | -0.0103 | -0.4031 |
| 47 | 2-5 years | sheep | the growing season | MG | 3 | -0.1602 | -0.0155 | -1.0307 | -0.7656 | |  |  |  |  |  |  | -0.0367 | -0.3751 |
| 47 | 2-5 years | sheep | the growing season | MG | 3 | 0.0096 | 0.7015 | -0.6808 | -0.419 | |  |  |  |  |  |  | -0.0042 | -0.3214 |
| 47 | 2-5 years | sheep | the growing season | MG | 3 | 0.7113 | 0.0719 | -1.294 | -0.007 | |  |  |  |  |  |  | -0.0612 | 0.0463 |
| 47 | 2-5 years | sheep | the growing season | MG | 3 |  | -1.3528 |  |  | |  |  |  |  |  |  | 0.0491 | -0.914 |
| 47 | 2-5 years | sheep | the growing season | MG | 3 |  | -2.5682 |  |  | |  |  |  |  |  |  | -0.0257 | 0.3769 |
| 47 | 2-5 years | sheep | the growing season | MG | 3 |  | -0.6596 |  |  | |  |  |  |  |  |  | -0.1017 | -0.0916 |
| 47 | 2-5 years | sheep | the growing season | MG | 3 |  | -2.1269 |  |  | |  |  |  |  |  |  | 0.0202 | -0.1495 |
| 47 | 2-5 years | sheep | the growing season | MG | 3 |  | -0.4116 |  |  | |  |  |  |  |  |  | -0.0425 | 0.7324 |
| 47 | 2-5 years | sheep | the growing season | MG | 3 |  | -0.8439 |  |  | |  |  |  |  |  |  | 0.0015 | 0.3663 |
| 48 | 2-5 years | sheep | annual | MG | 3 | -0.178 | -0.0214 | 0.0361 | -0.0241 | | -0.0916 | -0.7034 |  | -0.1926 | -0.1022 |  | 0.05 | -1.0728 |
| 48 | 2-5 years | sheep | annual | MG | 3 | -0.0575 | 0.0704 |  |  | | -0.0883 | -0.5633 |  | -0.42 | -0.0469 |  | 0.0752 | -1.1239 |
| 48 | 2-5 years | sheep | annual | MG | 3 | -0.5846 | 0.1652 |  |  | | -0.3539 | -0.334 |  | -0.2683 | 0.0636 |  | 0.076 | -0.5089 |
| 48 | 2-5 years | sheep | annual | MG | 3 |  | -0.0678 |  |  | | 0.0912 | -0.6987 |  | -0.4205 | 0.3135 |  | 0.0194 | -0.55 |
| 48 | 2-5 years | sheep | annual | MG | 3 |  | -0.0833 |  |  | |  |  |  |  |  |  |  |  |
| 48 | 2-5 years | sheep | annual | MG | 3 |  | -0.2655 |  |  | |  |  |  |  |  |  |  |  |
| 48 | 2-5 years | sheep | annual | MG | 3 |  | -0.3303 |  |  | |  |  |  |  |  |  |  |  |
| 48 | 2-5 years | sheep | the growing season | MG | 3 | 0.0882 | 0.3068 | 0.2646 | 0.2889 | | 0.1438 | -0.2885 |  | 0.0907 | 0.2517 |  | -0.2015 | -0.5697 |
| 48 | 2-5 years | sheep | the growing season | MG | 3 | 0.0423 | 0.158 |  |  | | -0.0591 | -0.3354 |  | -0.0986 | 0.3218 |  | -0.1329 | -0.4652 |
| 48 | 2-5 years | sheep | the growing season | MG | 3 | -0.4377 | 0.6734 |  |  | | 0.0868 | -0.3375 |  | 0.034 | 0.4461 |  | -0.0081 | 0.0056 |
| 48 | 2-5 years | sheep | the growing season | MG | 3 |  | 0.6848 |  |  | | -0.1478 | -0.9788 |  | -0.1564 | 0.3937 |  | -0.0847 | 0.0441 |
| 48 | 2-5 years | sheep | the growing season | MG | 3 |  | -0.1106 |  |  | |  |  |  |  |  |  |  |  |
| 48 | 2-5 years | sheep | the growing season | MG | 3 |  | 0.0381 |  |  | |  |  |  |  |  |  |  |  |
| 48 | 2-5 years | sheep | the growing season | MG | 3 |  | -0.1385 |  |  | |  |  |  |  |  |  |  |  |
| 49 | 1 year | mixed | annual | LG | 3 |  |  |  |  | |  |  |  |  |  |  |  | -0.5909 |
| 49 | 1 year | mixed | annual | LG | 3 |  |  |  |  | |  |  |  |  |  |  |  | -0.9025 |
| 49 | 1 year | mixed | annual | MG | 3 |  |  |  |  | |  |  |  |  |  |  |  | -0.7233 |
| 49 | 1 year | mixed | annual | MG | 3 |  |  |  |  | |  |  |  |  |  |  |  | -1.0348 |
| 49 | 1 year | mixed | annual | HG | 3 |  |  |  |  | |  |  |  |  |  |  |  | 0.0184 |
| 49 | 1 year | mixed | annual | HG | 3 |  |  |  |  | |  |  |  |  |  |  |  | -0.5859 |
| 49 | 1 year | mixed | annual | HG | 3 |  |  |  |  | |  |  |  |  |  |  |  | -0.2931 |
| 49 | 1 year | mixed | annual | HG | 3 |  |  |  |  | |  |  |  |  |  |  |  | -0.8974 |
| 49 | 1 year | mixed | annual | EG | 3 |  |  |  |  | |  |  |  |  |  |  |  | -1.3919 |
| 49 | 1 year | mixed | annual | EG | 3 |  |  |  |  | |  |  |  |  |  |  |  | -1.7034 |
| 49 | 1 year | mixed | non-growing season | MG | 3 |  |  |  |  | |  |  |  |  |  |  |  | -0.0902 |
| 49 | 1 year | mixed | non-growing season | MG | 3 |  |  |  |  | |  |  |  |  |  |  |  | 0.14 |
| 49 | 1 year | mixed | non-growing season | MG | 3 |  |  |  |  | |  |  |  |  |  |  |  | -0.4017 |
| 49 | 1 year | mixed | non-growing season | MG | 3 |  |  |  |  | |  |  |  |  |  |  |  | -0.1715 |
| 49 | ＞5 years | mixed | annual | LG | 3 |  |  |  |  | | -0.1409 |  |  |  |  | 0.1833 |  |  |
| 49 | ＞5 years | mixed | annual | LG | 3 |  |  |  |  | | -0.0572 |  |  |  |  | 0.074 |  |  |
| 49 | ＞5 years | mixed | annual | MG | 3 |  |  |  |  | | -0.5633 |  |  |  |  | 0.2507 |  |  |
| 49 | ＞5 years | mixed | annual | MG | 3 |  |  |  |  | | -0.4796 |  |  |  |  | 0.1414 |  |  |
| 49 | ＞5 years | mixed | annual | HG | 3 |  |  |  |  | | -0.0147 |  |  |  |  | 0.1159 |  |  |
| 49 | ＞5 years | mixed | annual | HG | 3 |  |  |  |  | | -0.7928 |  |  |  |  | 0.1894 |  |  |
| 49 | ＞5 years | mixed | annual | HG | 3 |  |  |  |  | | 0.069 |  |  |  |  | 0.0067 |  |  |
| 49 | ＞5 years | mixed | annual | HG | 3 |  |  |  |  | | -0.7091 |  |  |  |  | 0.0802 |  |  |
| 49 | ＞5 years | mixed | annual | EG | 3 |  |  |  |  | | -0.7303 |  |  |  |  | 0.177 |  |  |
| 49 | ＞5 years | mixed | annual | EG | 3 |  |  |  |  | | -0.6466 |  |  |  |  | 0.0678 |  |  |
| 49 | ＞5 years | mixed | non-growing season | MG | 3 |  |  |  |  | | -0.2378 |  |  |  |  | 0.0992 |  |  |
| 49 | ＞5 years | mixed | non-growing season | MG | 3 |  |  |  |  | | -0.068 |  |  |  |  | 0.1986 |  |  |
| 49 | ＞5 years | mixed | non-growing season | MG | 3 |  |  |  |  | | -0.1542 |  |  |  |  | -0.0101 |  |  |
| 49 | ＞5 years | mixed | non-growing season | MG | 3 |  |  |  |  | | 0.0157 |  |  |  |  | 0.0894 |  |  |
| 50 | ＞5 years | mixed | annual | HG | 3 |  |  |  |  | | 0.0081 | 0.1499 | 0.2159 | -0.0554 | -0.5922 | -0.0193 |  |  |
| 50 | ＞5 years | mixed | annual | HG | 3 |  |  |  |  | | -0.0481 | 0.0924 | -0.0101 | 0.1478 | -0.4653 | -0.0092 |  |  |
| 50 | ＞5 years | mixed | annual | HG | 3 |  |  |  |  | | 0.0418 | 0.2311 | 0.0797 | -0.1396 | -0.9417 | 0 |  |  |
| 50 | ＞5 years | mixed | non-growing season | LG | 3 |  |  |  |  | |  |  | -0.0828 | -0.4037 | -0.6467 | 0.0328 |  |  |
| 50 | ＞5 years | mixed | non-growing season | LG | 3 |  |  |  |  | |  |  | -0.0326 | 0.4585 | -0.4234 | -0.0151 |  |  |
| 50 | ＞5 years | mixed | non-growing season | LG | 3 |  |  |  |  | |  |  | 0.1966 | 0.5713 | -0.354 | -0.0367 |  |  |
| 50 | ＞5 years | mixed | non-growing season | MG | 3 |  |  |  |  | | 0.0493 | 0.0846 | -0.1841 | -0.0927 | -0.3383 | 0.0118 |  |  |
| 50 | ＞5 years | mixed | non-growing season | MG | 3 |  |  |  |  | | 0.0258 | 0.0572 | -0.3458 | -0.0248 | -0.1643 | -0.0081 |  |  |
| 50 | ＞5 years | mixed | non-growing season | MG | 3 |  |  |  |  | | -0.0302 | 0.0625 | -0.2859 | 0.2799 | -0.5174 | -0.0205 |  |  |
| 50 | ＞5 years | mixed | non-growing season | MG | 3 |  |  |  |  | | -0.0222 | 0.1769 |  |  |  |  |  |  |
| 50 | ＞5 years | mixed | non-growing season | MG | 3 |  |  |  |  | | 0.066 | 0.2927 |  |  |  |  |  |  |
| 50 | ＞5 years | mixed | non-growing season | MG | 3 |  |  |  |  | | 0.0269 | 0.2776 |  |  |  |  |  |  |
| 51 | ＞5 years | sheep | annual | MG | 6 |  |  |  |  | | -0.0741 | 0.1617 | 0.1573 | -0.0118 | -0.0486 |  | 0.0715 | -0.1948 |
| 51 | ＞5 years | sheep | annual | MG | 6 |  |  |  |  | | 0 | -0.1818 | 0.0727 | -0.2788 | 0.0857 |  | 0.0294 | -0.1114 |
| 51 | ＞5 years | sheep | annual | MG | 6 |  |  |  |  | | 0.087 | 0.05 | -0.1108 | 0.5501 | 0.1301 |  | 0.0072 | -0.1368 |
| 51 | ＞5 years | sheep | annual | MG | 6 |  |  |  |  | | -0.0741 | -0.3377 | 0.1604 | -0.2684 | -0.1082 |  | -0.0073 | -0.3165 |
| 51 | ＞5 years | sheep | annual | HG | 6 |  |  |  |  | | 0.069 | -0.5184 | 0.2213 | -0.155 | 0.0434 |  | 0.1054 | -0.3912 |
| 51 | ＞5 years | sheep | annual | HG | 6 |  |  |  |  | | 0 | -0.1845 | 0.3602 | 0.3919 | -0.0703 |  | 0.0783 | -0.2989 |
| 51 | ＞5 years | sheep | annual | HG | 6 |  |  |  |  | | 0.1542 | -0.2103 | -0.0162 | 0.2154 | 0.1725 |  | 0.0858 | -0.5071 |
| 51 | ＞5 years | sheep | annual | HG | 6 |  |  |  |  | | 0.2231 | -0.1556 | 0.0733 | -0.003 | 0.3473 |  | 0.0789 | -0.4681 |
| 51 | ＞5 years | sheep | annual | HG | 6 |  |  |  |  | | 0.087 | 0.31 | -0.0799 | 0.9675 | 0.1301 |  | 0.0286 | -0.2826 |
| 51 | ＞5 years | sheep | annual | HG | 6 |  |  |  |  | | 0.4353 | -0.0015 | 0.0729 | 1.5267 | 0.5326 |  | 0.0144 | -0.226 |
| 51 | ＞5 years | sheep | annual | HG | 6 |  |  |  |  | | 0.1335 | -0.1825 | 0.2571 | 0.1116 | 0.2544 |  | 0.0144 | -0.0204 |
| 51 | ＞5 years | sheep | annual | HG | 6 |  |  |  |  | | 0.069 | -0.6404 | -0.0548 | 0.256 | 0.3928 |  | 0.0072 | 0 |
| 51 | ＞5 years | sheep | the growing season | HG | 6 |  |  |  |  | | 0.1942 | 0.0997 | 0.4049 | 0.1399 | 0.1605 |  | 0.0292 | -0.17 |
| 51 | ＞5 years | sheep | the growing season | HG | 6 |  |  |  |  | | -0.0741 | -1.0924 | -0.1097 | -0.2557 | -0.1192 |  | 0.1186 | -0.1457 |
| 51 | ＞5 years | sheep | the growing season | HG | 6 |  |  |  |  | | 0 | 0.6764 | -0.1482 | 0.1805 | 0.1308 |  | 0.058 | -0.3213 |
| 51 | ＞5 years | sheep | the growing season | HG | 6 |  |  |  |  | | 0.1542 | -0.0834 | -0.2263 | -0.2957 | 0.1742 |  | 0.0926 | -0.1386 |
| 51 | ＞5 years | sheep | the growing season | HG | 6 |  |  |  |  | | 0.1671 | 0.339 | -0.074 | 1.3972 | 0.1513 |  | 0.0286 | -0.2356 |
| 51 | ＞5 years | sheep | the growing season | HG | 6 |  |  |  |  | | 0.3102 | 0.38 | -0.1476 | 0.3053 | 0.3774 |  | 0 | -0.1861 |
| 51 | ＞5 years | sheep | the growing season | HG | 6 |  |  |  |  | | -0.0741 | -0.8556 | 0.1152 | -0.5523 | -0.0943 |  | 0.0072 | -0.3446 |
| 51 | ＞5 years | sheep | the growing season | HG | 6 |  |  |  |  | | -0.1542 | -0.0832 | 0.2374 | -0.0399 | -0.1437 |  | 0.0072 | -0.4201 |
| 52 | 1 year | sheep | the growing season | LG | 3 |  |  |  |  | |  |  |  | 0 | -0.0888 | -0.0145 | -0.0009 | 0.3128 |
| 52 | 1 year | sheep | the growing season | LG | 3 |  |  |  |  | |  |  |  | 0.6437 | -0.171 | -0.0251 |  | 0.1467 |
| 52 | 1 year | sheep | the growing season | MG | 3 |  |  |  |  | |  |  |  | -0.3029 | -0.1296 | 0.0013 | 0.0193 | 0.0882 |
| 52 | 1 year | sheep | the growing season | MG | 3 |  |  |  |  | |  |  |  | 0.2238 | -0.1235 | -0.015 |  | 0.1198 |
| 52 | 1 year | sheep | the growing season | HG | 3 |  |  |  |  | |  |  |  | 0.2579 | -0.114 | 0.0232 | -0.0009 | 0.0161 |
| 52 | 1 year | sheep | the growing season | HG | 3 |  |  |  |  | |  |  |  | 0.8212 | -0.1215 | 0.0099 |  | 0.0376 |
| 52 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.0148 |  |
| 52 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | |  |  |  |  |  |  | -0.0254 |  |
| 52 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | |  |  |  |  |  |  | -0.0086 |  |
| 52 | ＞5 years | sheep | the growing season | LG | 3 |  |  |  |  | |  |  |  | 0.0565 | 0.1944 | 0.0063 |  | -0.08 |
| 52 | ＞5 years | sheep | the growing season | LG | 3 |  |  |  |  | |  |  |  | -0.1354 | 0.3106 | 0.0063 |  | -0.0676 |
| 52 | ＞5 years | sheep | the growing season | MG | 3 |  |  |  |  | |  |  |  | -0.0436 | -0.0146 | 0.0089 |  | -0.1186 |
| 52 | ＞5 years | sheep | the growing season | MG | 3 |  |  |  |  | |  |  |  | -0.3864 | -0.035 | 0.0089 |  | -0.095 |
| 52 | ＞5 years | sheep | the growing season | MG | 3 |  |  |  |  | |  |  |  |  |  |  |  |  |
| 52 | ＞5 years | sheep | the growing season | MG | 3 |  |  |  |  | |  |  |  |  |  |  |  |  |
| 52 | ＞5 years | sheep | the growing season | MG | 3 |  |  |  |  | |  |  |  |  |  |  |  |  |
| 52 | ＞5 years | sheep | the growing season | MG | 3 |  |  |  |  | |  |  |  |  |  |  |  |  |
| 52 | ＞5 years | sheep | the growing season | MG | 3 |  |  |  |  | |  |  |  |  |  |  |  |  |
| 52 | ＞5 years | sheep | the growing season | MG | 3 |  |  |  |  | |  |  |  |  |  |  |  |  |
| 52 | ＞5 years | sheep | the growing season | HG | 3 |  |  |  |  | |  |  |  | -0.435 | -0.0559 | 0.0101 |  | -0.1464 |
| 52 | ＞5 years | sheep | the growing season | HG | 3 |  |  |  |  | |  |  |  | -0.4986 | -0.0603 | 0.0101 |  | -0.1296 |
| 53 | 1 year | sheep | the growing season | LG | 3 |  |  |  |  | |  |  | 0.0448 |  |  |  |  |  |
| 53 | 1 year | sheep | the growing season | LG | 3 |  |  |  |  | |  |  | 0.0456 |  |  |  |  |  |
| 53 | 1 year | sheep | the growing season | LG | 3 |  |  |  |  | |  |  | 0.2449 |  |  |  |  |  |
| 53 | 1 year | sheep | the growing season | LG | 3 |  |  |  |  | |  |  | 0.1349 |  |  |  |  |  |
| 53 | 1 year | sheep | the growing season | LG | 3 |  |  |  |  | |  |  | -0.0529 |  |  |  |  |  |
| 53 | 1 year | sheep | the growing season | MG | 3 |  |  |  |  | |  |  | -0.0591 |  |  |  |  |  |
| 53 | 1 year | sheep | the growing season | MG | 3 |  |  |  |  | |  |  | -0.0655 |  |  |  |  |  |
| 53 | 1 year | sheep | the growing season | MG | 3 |  |  |  |  | |  |  | 0.239 |  |  |  |  |  |
| 53 | 1 year | sheep | the growing season | MG | 3 |  |  |  |  | |  |  | 0.1437 |  |  |  |  |  |
| 53 | 1 year | sheep | the growing season | MG | 3 |  |  |  |  | |  |  | -0.1723 |  |  |  |  |  |
| 53 | 1 year | sheep | the growing season | HG | 3 |  |  |  |  | |  |  | -0.1947 |  |  |  |  |  |
| 53 | 1 year | sheep | the growing season | HG | 3 |  |  |  |  | |  |  | -0.1626 |  |  |  |  |  |
| 53 | 1 year | sheep | the growing season | HG | 3 |  |  |  |  | |  |  | 0.1374 |  |  |  |  |  |
| 53 | 1 year | sheep | the growing season | HG | 3 |  |  |  |  | |  |  | 0.0802 |  |  |  |  |  |
| 53 | 1 year | sheep | the growing season | HG | 3 |  |  |  |  | |  |  | -0.1409 |  |  |  |  |  |
| 54 | ＞5 years | mixed | annual | HG | 3 | -0.4932 | -0.236 | 0.5553 | -0.263 | |  |  |  |  |  |  |  | -0.0128 |
| 54 | ＞5 years | mixed | annual | HG | 3 | -0.7913 | -0.4059 |  |  | |  |  |  |  |  |  |  | -0.1505 |
| 55 | ＞5 years | mixed | annual | LG | 7 | -0.1448 | -0.1148 | 0.2509 | -0.1566 | | -0.2513 |  |  |  |  | 0.0272 | 0.0402 |  |
| 55 | ＞5 years | mixed | annual | LG | 7 | -0.3657 |  |  |  | |  |  |  |  |  |  |  |  |
| 56 | ＞5 years | mixed | annual | LG | 3 | 0.1201 | 0.0735 | -0.0644 | 0.061 | |  |  |  |  |  |  | 0.1836 |  |
| 56 | ＞5 years | mixed | annual | LG | 3 |  | 0.0356 |  |  | |  |  |  |  |  |  | 0.2279 |  |
| 56 | ＞5 years | mixed | annual | LG | 3 |  | 0.0506 |  |  | |  |  |  |  |  |  | 0.3137 |  |
| 56 | ＞5 years | mixed | annual | LG | 3 |  | 0.0333 |  |  | |  |  |  |  |  |  | 0.3443 |  |
| 56 | ＞5 years | mixed | annual | MG | 3 | -0.4041 | -0.1365 | 0.1403 | -0.2742 | |  |  |  |  |  |  | 0.2461 |  |
| 56 | ＞5 years | mixed | annual | MG | 3 |  | -0.3912 |  |  | |  |  |  |  |  |  | 0.1823 |  |
| 56 | ＞5 years | mixed | annual | MG | 3 |  | -0.4385 |  |  | |  |  |  |  |  |  | 0.2388 |  |
| 56 | ＞5 years | mixed | annual | MG | 3 |  | -0.3318 |  |  | |  |  |  |  |  |  | 0.2634 |  |
| 56 | ＞5 years | mixed | annual | HG | 3 | -0.8374 | -0.2607 | 0.4813 | -0.3867 | |  |  |  |  |  |  | 0.19 |  |
| 56 | ＞5 years | mixed | annual | HG | 3 |  | -0.4347 |  |  | |  |  |  |  |  |  | 0.1133 |  |
| 56 | ＞5 years | mixed | annual | HG | 3 |  | -0.4778 |  |  | |  |  |  |  |  |  | 0.0941 |  |
| 56 | ＞5 years | mixed | annual | HG | 3 |  | -0.4376 |  |  | |  |  |  |  |  |  | 0.027 |  |
| 57 | 2-5 years | mixed | annual | EG | 3 |  |  |  |  | | -0.1098 | -0.0785 | -0.0307 | 1.1012 | 0.1274 | 0.0399 | -0.0854 |  |
| 57 | 2-5 years | mixed | annual | EG | 3 |  |  |  |  | | 0.1062 | -0.0483 | -0.0056 | 0.6451 | 0.3557 | 0.0245 | -0.0603 |  |
| 57 | 2-5 years | mixed | annual | EG | 3 |  |  |  |  | | 0.1275 | 0.0094 | 0.0406 | 0.5607 | 0.2961 | 0.0175 | -0.0479 |  |
| 58 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | | 0.0924 | -0.0625 | 0.1281 | 0.4495 | -0.1077 | -0.035 |  |  |
| 58 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | | 0.1769 | 0.087 | 0.1133 | 0.5635 | 0.1061 | -0.0143 |  |  |
| 59 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | | -0.029 | 0.026 | -0.0776 | 0.1542 | -0.0015 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | | -0.0822 | -0.0723 | -0.0102 | 0.047 | -0.0859 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | | 0.0896 | 0.2183 | 0.0049 | -0.2151 | 0.0487 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | | -0.1268 | -0.0488 | -0.1406 | 0.0937 | -0.1493 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | | -0.1542 | -0.0476 | -0.0315 | -0.2384 | -0.1515 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | | 0 | 0.0377 | -0.0101 | -0.1335 | -0.0219 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | | 0.0465 | 0 | -0.0239 | 0.2582 | 0.1227 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | | -0.1178 | 0.0918 | -0.0558 | 0.0381 | -0.0227 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | | -0.023 | 0.0991 | 0.0457 | 0.0541 | -0.0453 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | | -0.1769 | -0.1671 | 0.05 | 0.1759 | -0.1952 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | | -0.1178 | -0.0822 | 0.2422 | -0.0513 | -0.051 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | | -0.087 | -0.4162 | -0.0309 | -0.0243 | -0.2067 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | | -0.1214 | -0.1001 | -0.1341 | 0.2076 | -0.0315 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | | -0.1625 | -0.1452 | -0.0941 | 0.0831 | -0.1153 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | | -0.1112 | -0.08 | 0.2204 | 0.0986 | -0.1628 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | | -0.0572 | -0.2549 | -0.0568 | 0 | -0.1045 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | | -0.1178 | -0.1366 | -0.1216 | 0.1095 | 0.0219 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | | -0.1335 | -0.0606 | -0.0009 | 0.2877 | -0.0898 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | | -0.2231 | -0.0274 | 0.12 | -0.0922 | -0.0591 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | | -0.0282 | -0.2624 | -0.1111 | 0.0827 | -0.0783 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | | -0.087 | -0.0953 | -0.1427 | -0.0078 | -0.0839 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | | -0.0896 | 0 | -0.1404 | 0.0165 | -0.003 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | | -0.1411 | 0.0674 | -0.0028 | -0.0194 | -0.0617 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | | 0.0308 | 0.0476 | -0.1921 | -0.2476 | 0 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | | -0.2113 | -0.1001 | -0.1178 | 0.1098 | -0.163 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | | -0.1823 | -0.0976 | 0.0137 | -0.1915 | -0.0782 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | | -0.1112 | -0.1671 | -0.1892 | -0.0805 | -0.1202 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | | -0.1268 | -0.0976 | -0.1514 | 0.1719 | -0.0382 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | | -0.2513 | -0.1226 | -0.1417 | -0.1349 | -0.2285 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | | -0.2007 | -0.0426 | 0.0087 | -0.0572 | -0.1792 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | | -0.2097 | -0.1978 | -0.1586 | 0.2915 | -0.2889 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | | -0.1495 | -0.0541 | 0.1255 | -0.3646 | -0.1121 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | | -0.1495 | -0.4162 | 0.0502 | -0.1009 | -0.2522 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | | -0.2231 | -0.0241 | -0.0574 | -0.08 | -0.1097 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | | -0.2231 | -0.1769 | -0.119 | 0.1116 | -0.2157 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | | -0.2036 | -0.0526 | 0.0823 | -0.2247 | -0.151 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | | -0.087 | -0.3567 | -0.1245 | -0.174 | -0.0523 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | | -0.1178 | -0.2126 | -0.0477 | -0.0596 | -0.0614 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | | -0.0253 | 0.029 | -0.2216 | 0.3015 | -0.0585 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | | -0.1924 | 0.0526 | 0.0396 | -0.2982 | -0.0404 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | | -0.1178 | -0.1082 | 0 | -0.1997 | -0.1296 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | | -0.087 | -0.023 | -0.1477 | -0.1425 | -0.0335 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | | 0 | 0 | -0.0684 | -0.0339 | 0.0802 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | | -0.1411 | 0.0455 | -0.0204 | -0.0097 | -0.0163 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | | 0 | 0 | -0.0463 | -0.1308 | -0.0222 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | | -0.1268 | -0.0741 | -0.0419 | 0.1335 | -0.2391 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | | -0.0488 | 0.023 | -0.0342 | -0.1823 | 0.1052 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | | -0.0822 | -0.1671 | 0.0253 | -0.2113 | -0.0961 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | | -0.1268 | -0.0723 | -0.0109 | -0.1133 | 0.0069 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | | -0.1178 | -0.0392 | -0.1148 | -0.1804 | -0.1276 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | | -0.0706 | -0.0211 | -0.0343 | -0.0795 | -0.1181 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | | 0.0526 | -0.1372 | -0.1504 | 0.2262 | -0.0444 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | | -0.1823 | -0.1411 | 0.2502 | -0.3178 | -0.0428 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | | -0.1495 | -0.2948 | 0.1303 | -0.0576 | -0.192 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | | -0.2595 | 0.0235 | 0.041 | 0.0418 | -0.1112 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | | -0.1335 | -0.1144 | 0.0107 | -0.0402 | -0.2095 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | | -0.1411 | -0.1082 | 0.1331 | -0.2401 | -0.0912 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | | -0.087 | 0 | -0.1365 | -0.0342 | -0.0495 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | | -0.2513 | -0.2126 | 0.0681 | 0.0164 | -0.0324 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | | -0.1054 | 0.029 | -0.2149 | 0.1382 | -0.1495 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | | 0.0247 | 0.0267 | 0.188 | -0.2326 | -0.0319 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | | -0.0572 | -0.026 | -0.0409 | -0.0087 | -0.0712 |  |  |  |
| 59 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | | -0.1178 | -0.0465 | -0.0341 | -0.1515 | -0.0556 |  |  |  |
| 60 | ＞5 years | mixed | the growing season | EG | 3 |  |  |  |  | | -0.2228 | -0.3971 |  |  | -0.232 | 0.2077 | 0.5508 | -0.3349 |
| 60 | ＞5 years | mixed | the growing season | EG | 3 |  |  |  |  | | -0.1778 | -0.3485 |  |  | -0.2003 | 0.1922 | 0.4999 | -0.2896 |
| 60 | ＞5 years | mixed | the growing season | EG | 3 |  |  |  |  | | -0.151 | -0.2522 |  |  | -0.1448 | 0.106 | 0.3305 | -0.2438 |
| 60 | ＞5 years | mixed | the growing season | EG | 3 |  |  |  |  | | -0.1303 | -0.1843 |  |  | -0.1167 | 0.1339 | 0.3011 | -0.2209 |
| 60 | ＞5 years | mixed | the growing season | EG | 3 |  |  |  |  | | -0.0901 | -0.1571 |  |  | -0.0836 | 0.1316 | 0.2581 | -0.1318 |
| 60 | ＞5 years | mixed | the growing season | EG | 3 |  |  |  |  | | -0.0514 | -0.1127 |  |  | -0.0487 | 0.0529 | 0.1165 | -0.0609 |
| 60 | ＞5 years | mixed | the growing season | EG | 3 |  |  |  |  | | -0.0094 | -0.1049 |  |  | -0.0506 | 0.0695 | 0.1938 | -0.0364 |
| 60 | ＞5 years | mixed | the growing season | EG | 3 |  |  |  |  | | 0.0016 | 0.0018 |  |  | 0.0321 | 0.0059 | 0.1054 | -0.0072 |
| 60 | ＞5 years | mixed | the growing season | EG | 3 |  |  |  |  | | -0.1339 | -0.494 |  |  | -0.1834 | 0.1355 | 0.1534 | -0.3235 |
| 60 | ＞5 years | mixed | the growing season | EG | 3 |  |  |  |  | | -0.1455 | -0.4343 |  |  | -0.2337 | 0.1298 | 0.1784 | -0.269 |
| 60 | ＞5 years | mixed | the growing season | EG | 3 |  |  |  |  | | -0.1238 | -0.3989 |  |  | -0.0671 | 0.0825 | 0.0191 | -0.2973 |
| 60 | ＞5 years | mixed | the growing season | EG | 3 |  |  |  |  | | -0.079 | -0.3316 |  |  | -0.1071 | 0.089 | 0.1233 | -0.2223 |
| 60 | ＞5 years | mixed | the growing season | EG | 3 |  |  |  |  | | -0.0817 | -0.2346 |  |  | -0.1403 | 0.089 | 0.0678 | -0.1411 |
| 60 | ＞5 years | mixed | the growing season | EG | 3 |  |  |  |  | | -0.048 | -0.2118 |  |  | -0.1094 | 0.0507 | 0.1097 | -0.1079 |
| 60 | ＞5 years | mixed | the growing season | EG | 3 |  |  |  |  | | -0.0427 | -0.1082 |  |  | -0.0795 | 0.0006 | 0.0848 | -0.0365 |
| 60 | ＞5 years | mixed | the growing season | EG | 3 |  |  |  |  | | -0.0309 | -0.0247 |  |  | -0.0406 | 0.0403 | 0.0231 | 0.0243 |
| 61 | 1 year | cattle | the growing season | MG | 3 | -0.2297 |  |  |  | | -0.0215 | -0.4563 | 0.497 | -0.1621 | -0.1033 |  | -0.0064 | -0.0374 |
| 61 | 1 year | cattle | the growing season | MG | 3 |  |  |  |  | | -0.2933 | -0.4857 | -0.3043 | 0.0705 | -0.0281 |  | 0.0171 | -0.0879 |
| 61 | 1 year | cattle | the growing season | MG | 3 |  |  |  |  | | 0.0189 | 0.3093 | -0.1823 | -0.3124 | -0.023 |  | 0.0471 | 0.0089 |
| 61 | 1 year | cattle | the growing season | HG | 3 | -0.4375 |  |  |  | | -0.0569 | -0.5785 | 0.5325 | -0.5464 | -0.2216 |  | 0.1692 | 0.0468 |
| 61 | 1 year | cattle | the growing season | HG | 3 |  |  |  |  | | -0.3717 | -0.5498 | -0.2134 | 0.3687 | -0.2462 |  | 0.1214 | 0.0131 |
| 61 | 1 year | cattle | the growing season | HG | 3 |  |  |  |  | | -0.1677 | -0.1549 | -0.1267 | -0.32 | -0.0473 |  | 0.0828 | -0.0312 |
| 62 | 1 year | cattle | the growing season | LG | 3 | -0.1714 | -0.1131 | 0.0583 | -0.1423 | |  |  |  |  |  |  | -0.08 | -0.0303 |
| 62 | 1 year | cattle | the growing season | MG | 3 | -0.0843 | -0.2713 | -0.187 | -0.1718 | |  |  |  |  |  |  | 0.1092 | -0.0188 |
| 62 | 1 year | cattle | the growing season | HG | 3 | 0.0185 | -0.0269 | -0.0454 | -0.0035 | |  |  |  |  |  |  | 0.0918 | -0.1318 |
| 62 | 1 year | cattle | the growing season | EG | 3 | -0.5421 | 0.0994 | 0.6415 | -0.1762 | |  |  |  |  |  |  | -0.0905 | -0.0069 |
| 63 | ＞5 years | mixed | the growing season | EG | 3 |  |  |  |  | | 0.6019 | -0.071 | 0.2687 |  | 0.277 | 0.0012 |  | -0.3896 |
| 63 | ＞5 years | mixed | the growing season | EG | 3 |  |  |  |  | | 0.3588 | -0.0028 | 0.0452 |  | -0.032 | -0.0322 |  | -0.0314 |
| 63 | ＞5 years | mixed | the growing season | EG | 3 |  |  |  |  | | -0.317 | -0.0342 | 0.4549 |  | -0.261 | 0.0497 |  | -0.2848 |
| 64 | ＞5 years | mixed | annual | LG | 3 |  |  |  |  | |  |  |  |  |  |  | -0.815 |  |
| 64 | ＞5 years | mixed | annual | LG | 3 |  |  |  |  | |  |  |  |  |  |  | -0.7044 |  |
| 64 | ＞5 years | mixed | annual | LG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.3433 |  |
| 64 | ＞5 years | mixed | annual | HG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.5713 |  |
| 64 | ＞5 years | mixed | annual | HG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.3942 |  |
| 64 | ＞5 years | mixed | annual | HG | 3 |  |  |  |  | |  |  |  |  |  |  | 0.6116 |  |
| 65 | 1 year | cattle | the growing season | LG | 6 | 0.0276 |  |  |  | | 0.0001 | 0.1163 | 0.0109 | 0.3586 | -0.116 |  | -0.3164 |  |
| 65 | 1 year | cattle | the growing season | LG | 6 | -0.3268 |  |  |  | | -0.0037 | 0.397 | -0.0987 | 0.0802 | -0.0603 |  | -0.2556 |  |
| 65 | 1 year | cattle | the growing season | LG | 6 | -0.3562 |  |  |  | | 0.0043 | 0.0807 | -0.1827 | 0.0641 | -0.0365 |  | -0.1116 |  |
| 65 | 1 year | cattle | the growing season | LG | 6 | -0.3128 |  |  |  | | 0.0008 | -0.2475 | -0.1209 | -0.0508 | -0.0267 |  | -0.1056 |  |
| 65 | 1 year | cattle | the growing season | LG | 6 |  |  |  |  | | -0.0053 | 0.042 | 0.0166 | -0.221 | -0.0489 |  |  |  |
| 65 | 1 year | cattle | the growing season | LG | 6 |  |  |  |  | | 0.0004 | -0.2587 | -0.6694 | -0.0773 | 0.0156 |  |  |  |
| 65 | 1 year | cattle | the growing season | LG | 6 |  |  |  |  | | -0.0028 | -0.1225 | -0.3202 | -0.0675 | 0.0403 |  |  |  |
| 65 | 1 year | cattle | the growing season | LG | 6 |  |  |  |  | | -0.0044 | -0.1849 | -0.3427 | -0.0864 | 0.0222 |  |  |  |
| 65 | 1 year | cattle | the growing season | LG | 6 |  |  |  |  | | -0.0016 | -0.0475 | -0.0086 | -0.3442 | -0.073 |  |  |  |
| 65 | 1 year | cattle | the growing season | LG | 6 |  |  |  |  | | 0.0029 | 0.0577 | 0.1739 | -0.2035 | -0.0461 |  |  |  |
| 65 | 1 year | cattle | the growing season | LG | 6 |  |  |  |  | | 0.0006 | 0.0456 | 0.0377 | -0.0099 | 0.1549 |  |  |  |
| 65 | 1 year | cattle | the growing season | LG | 6 |  |  |  |  | | 0.0007 | -0.2106 | -0.1662 | 0.0057 | -0.0695 |  |  |  |
| 65 | 1 year | cattle | the growing season | MG | 6 | 0.0953 |  |  |  | | -0.0554 | 0.0674 | 0.004 | 0.7816 | -0.0851 |  | -0.0898 |  |
| 65 | 1 year | cattle | the growing season | MG | 6 | -0.3614 |  |  |  | | -0.2934 | 0.1558 | -0.1231 | 0.4365 | -0.0418 |  | -0.0572 |  |
| 65 | 1 year | cattle | the growing season | MG | 6 | -0.3668 |  |  |  | | -0.0168 | -0.0212 | -0.0665 | 0.011 | -0.0181 |  | -0.0219 |  |
| 65 | 1 year | cattle | the growing season | MG | 6 | -0.3387 |  |  |  | | -0.2591 | 0.1434 | -0.2037 | 0.0313 | -0.0769 |  | -0.0292 |  |
| 65 | 1 year | cattle | the growing season | MG | 6 |  |  |  |  | | -0.0116 | -0.0173 | -0.01 | -0.2001 | 0.1068 |  |  |  |
| 65 | 1 year | cattle | the growing season | MG | 6 |  |  |  |  | | 0.052 | -0.5989 | -0.1556 | -0.0389 | -0.0066 |  |  |  |
| 65 | 1 year | cattle | the growing season | MG | 6 |  |  |  |  | | 0.1398 | -0.1104 | -0.3011 | 0.0209 | 0.038 |  |  |  |
| 65 | 1 year | cattle | the growing season | MG | 6 |  |  |  |  | | -0.1011 | -0.0329 | -0.1685 | 0.0247 | -0.0861 |  |  |  |
| 65 | 1 year | cattle | the growing season | MG | 6 |  |  |  |  | | 0.0765 | 0.0254 | 0.0915 | -0.2236 | -0.0218 |  |  |  |
| 65 | 1 year | cattle | the growing season | MG | 6 |  |  |  |  | | 0.1978 | -0.0394 | 0.1423 | -0.1863 | 0.0301 |  |  |  |
| 65 | 1 year | cattle | the growing season | MG | 6 |  |  |  |  | | 0.0541 | 0.1333 | 0.0925 | -0.0099 | 0.2311 |  |  |  |
| 65 | 1 year | cattle | the growing season | MG | 6 |  |  |  |  | | 0.1894 | -0.1612 | 0.422 | -0.0506 | 0.01 |  |  |  |
| 65 | 1 year | cattle | the growing season | HG | 6 | 0.0125 |  |  |  | | -0.0187 | -0.004 | -0.0157 | 0.5106 | -0.1111 |  | -0.3804 |  |
| 65 | 1 year | cattle | the growing season | HG | 6 | -0.5066 |  |  |  | | -0.1258 | 0.0195 | -0.1949 | 0.2397 | 0.0093 |  | -0.3264 |  |
| 65 | 1 year | cattle | the growing season | HG | 6 | -0.6081 |  |  |  | | -0.0249 | -0.319 | -0.0636 | 0.0025 | 0.0101 |  | -0.2042 |  |
| 65 | 1 year | cattle | the growing season | HG | 6 | -0.5913 |  |  |  | | -0.1876 | -0.0671 | -0.1724 | 0.0116 | -0.0052 |  | -0.1388 |  |
| 65 | 1 year | cattle | the growing season | HG | 6 |  |  |  |  | | 0.2627 | -0.1145 | 0.0898 | -0.1566 | 0.0249 |  |  |  |
| 65 | 1 year | cattle | the growing season | HG | 6 |  |  |  |  | | 0.3873 | -0.2336 | -0.6506 | -0.0202 | -0.0427 |  |  |  |
| 65 | 1 year | cattle | the growing season | HG | 6 |  |  |  |  | | 0.2225 | -0.0971 | -0.1851 | 0.0265 | 0.067 |  |  |  |
| 65 | 1 year | cattle | the growing season | HG | 6 |  |  |  |  | | 0.0893 | -0.0269 | -0.1794 | -0.0126 | -0.0817 |  |  |  |
| 65 | 1 year | cattle | the growing season | HG | 6 |  |  |  |  | | 0.2911 | -0.0083 | -0.0009 | -0.1444 | -0.0713 |  |  |  |
| 65 | 1 year | cattle | the growing season | HG | 6 |  |  |  |  | | 0.5309 | -0.0808 | -0.0316 | -0.0879 | 0.0219 |  |  |  |
| 65 | 1 year | cattle | the growing season | HG | 6 |  |  |  |  | | 0.5292 | -0.3256 | 0.0975 | -0.0469 | 0.1255 |  |  |  |
| 65 | 1 year | cattle | the growing season | HG | 6 |  |  |  |  | | 0.2868 | -0.1232 | -0.0984 | -0.0291 | 0.0332 |  |  |  |
| 66 | 1 year | cattle | the growing season | LG | 3 | -0.2604 |  |  |  | | -0.0299 |  |  |  | -0.0179 |  |  |  |
| 66 | 1 year | cattle | the growing season | LG | 3 |  |  |  |  | | -0.0198 |  |  |  | 0.0308 |  |  |  |
| 66 | 1 year | cattle | the growing season | LG | 3 |  |  |  |  | | 0.0741 |  |  |  | -0.1361 |  |  |  |
| 66 | 1 year | cattle | the growing season | MG | 3 | -0.446 |  |  |  | | -0.0711 |  |  |  | 0.0018 |  |  |  |
| 66 | 1 year | cattle | the growing season | MG | 3 |  |  |  |  | | 0.0194 |  |  |  | -0.0318 |  |  |  |
| 66 | 1 year | cattle | the growing season | MG | 3 |  |  |  |  | | 0.0377 |  |  |  | 0.1491 |  |  |  |
| 66 | 1 year | cattle | the growing season | HG | 3 | -0.7894 |  |  |  | | -0.0924 |  |  |  | -0.0979 |  |  |  |
| 66 | 1 year | cattle | the growing season | HG | 3 |  |  |  |  | | -0.0606 |  |  |  | -0.0757 |  |  |  |
| 66 | 1 year | cattle | the growing season | HG | 3 |  |  |  |  | | 0 |  |  |  | 0.0222 |  |  |  |
| 66 | 2-5 years | cattle | the growing season | LG | 3 | -0.3306 |  |  |  | | -0.0503 |  |  |  | -0.0118 |  |  |  |
| 66 | 2-5 years | cattle | the growing season | LG | 3 | -0.6088 |  |  |  | | -0.0392 |  |  |  | -0.0103 |  |  |  |
| 66 | 2-5 years | cattle | the growing season | LG | 3 |  |  |  |  | | -0.0198 |  |  |  | 0.008 |  |  |  |
| 66 | 2-5 years | cattle | the growing season | LG | 3 |  |  |  |  | | 0.0972 |  |  |  | 0.0315 |  |  |  |
| 66 | 2-5 years | cattle | the growing season | LG | 3 |  |  |  |  | | 0 |  |  |  | 0.0125 |  |  |  |
| 66 | 2-5 years | cattle | the growing season | LG | 3 |  |  |  |  | | 0.08 |  |  |  | 0.0457 |  |  |  |
| 66 | 2-5 years | cattle | the growing season | MG | 6 | -0.5763 |  |  |  | | -0.0099 |  |  |  | 0.0055 |  |  |  |
| 66 | 2-5 years | cattle | the growing season | MG | 6 | -0.6242 |  |  |  | | -0.0594 |  |  |  | -0.0092 |  |  |  |
| 66 | 2-5 years | cattle | the growing season | MG | 3 |  |  |  |  | | 0 |  |  |  | 0.0057 |  |  |  |
| 66 | 2-5 years | cattle | the growing season | MG | 3 |  |  |  |  | | 0.1155 |  |  |  | -0.0298 |  |  |  |
| 66 | 2-5 years | cattle | the growing season | MG | 3 |  |  |  |  | | 0.0408 |  |  |  | 0.0139 |  |  |  |
| 66 | 2-5 years | cattle | the growing season | MG | 3 |  |  |  |  | | 0.1178 |  |  |  | 0.0421 |  |  |  |
| 66 | 2-5 years | cattle | the growing season | HG | 6 | -0.8571 |  |  |  | | -0.0711 |  |  |  | -0.062 |  |  |  |
| 66 | 2-5 years | cattle | the growing season | HG | 6 | -0.8565 |  |  |  | | -0.1118 |  |  |  | -0.1538 |  |  |  |
| 66 | 2-5 years | cattle | the growing season | HG | 3 |  |  |  |  | | -0.1942 |  |  |  | -0.1573 |  |  |  |
| 66 | 2-5 years | cattle | the growing season | HG | 3 |  |  |  |  | | -0.2029 |  |  |  | -0.2155 |  |  |  |
| 66 | 2-5 years | cattle | the growing season | HG | 3 |  |  |  |  | | 0.08 |  |  |  | -0.0428 |  |  |  |
| 66 | 2-5 years | cattle | the growing season | HG | 3 |  |  |  |  | | 0.1892 |  |  |  | 0.0762 |  |  |  |
| 67 | ＞5 years | sheep | the growing season | LG | 3 | -0.0094 | -0.2577 | -0.2483 | -0.2518 | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | LG | 3 | -0.1965 | -0.0777 | 0.1188 | -0.0816 | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | LG | 3 | -0.0416 | -0.2161 | -0.1745 | -0.2071 | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | LG | 3 | -0.0386 | -0.1259 | -0.0873 | -0.1196 | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | LG | 3 | -0.1318 | -0.056 | 0.0758 | -0.0603 | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | LG | 3 |  | -0.278 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | LG | 3 |  | -0.0875 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | LG | 3 |  | -0.2263 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | LG | 3 |  | -0.1307 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | LG | 3 |  | -0.1095 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | LG | 3 |  | -0.2884 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | LG | 3 |  | 0.0054 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | LG | 3 |  | -0.2589 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | LG | 3 |  | -0.212 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | LG | 3 |  | 0.0611 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | LG | 3 |  | -0.1365 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | LG | 3 |  | -0.1285 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | LG | 3 |  | -0.0958 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | LG | 3 |  | 0.0751 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | LG | 3 |  | 0.0124 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | MG | 3 | -0.3236 | -0.3409 | -0.0173 | -0.3406 | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | MG | 3 | -0.4633 | -0.1259 | 0.3374 | -0.1358 | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | MG | 3 | -0.129 | -0.2976 | -0.1685 | -0.2889 | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | MG | 3 | -0.4527 | -0.1423 | 0.3105 | -0.1612 | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | MG | 3 | -0.5916 | -0.2252 | 0.3664 | -0.2435 | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.3967 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.1687 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.3253 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.1669 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.2762 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.1718 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.0744 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.2933 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.1652 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.1546 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.3308 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | MG | 3 |  | 0.0157 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.1177 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | MG | 3 |  | 0.0245 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.0483 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | HG | 3 | -0.7411 | -0.867 | -0.1259 | -0.8642 | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | HG | 3 | -0.5059 | -0.1723 | 0.3336 | -0.1821 | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | HG | 3 | -0.2631 | -0.3806 | -0.1175 | -0.3747 | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | HG | 3 | -0.7332 | -0.2224 | 0.5109 | -0.2508 | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | HG | 3 | -0.7239 | -0.516 | 0.2079 | -0.5272 | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | HG | 3 |  | -0.9606 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | HG | 3 |  | -0.2306 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | HG | 3 |  | -0.4263 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | HG | 3 |  | -0.3113 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | HG | 3 |  | -0.5864 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | HG | 3 |  | -0.8899 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | HG | 3 |  | -0.0182 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | HG | 3 |  | -0.317 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | HG | 3 |  | -0.126 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | HG | 3 |  | -0.6001 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | HG | 3 |  | -0.4532 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | HG | 3 |  | -0.1334 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | HG | 3 |  | -0.2204 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | HG | 3 |  | 0.0631 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | HG | 3 |  | -0.0219 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | EG | 3 | -0.9228 | -0.8017 | 0.1211 | -0.8041 | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | EG | 3 | -0.7021 | -0.4203 | 0.2817 | -0.4288 | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | EG | 3 | -0.3861 | -0.5733 | -0.1872 | -0.5636 | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | EG | 3 | -0.9041 | -0.5083 | 0.3958 | -0.5315 | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | EG | 3 | -0.8312 | -0.7488 | 0.0824 | -0.7535 | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | EG | 3 |  | -0.9339 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | EG | 3 |  | -0.5145 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | EG | 3 |  | -0.648 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | EG | 3 |  | -0.6125 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | EG | 3 |  | -0.8611 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | EG | 3 |  | -0.8233 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | EG | 3 |  | -0.2659 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | EG | 3 |  | -0.6025 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | EG | 3 |  | -0.5495 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | EG | 3 |  | -0.7366 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | EG | 3 |  | -0.3209 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | EG | 3 |  | -0.1904 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | EG | 3 |  | -0.2349 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | EG | 3 |  | 0.0112 |  |  | |  |  |  |  |  |  |  |  |
| 67 | ＞5 years | sheep | the growing season | EG | 3 |  | -0.2915 |  |  | |  |  |  |  |  |  |  |  |
| 68 | 1 year | sheep | annual | EG | 2 |  |  |  |  | | 0.6712 |  | 0.4394 | -0.3194 | 0.6807 | -0.0192 | 0.0966 | -0.4565 |
| 68 | 1 year | sheep | annual | EG | 2 |  |  |  |  | | 0.4595 |  | 0.7436 | 0.665 | 0.4744 | -0.0234 | 0.0767 | -0.3882 |
| 68 | 1 year | sheep | annual | EG | 2 |  |  |  |  | | 1.0986 |  | 0.4394 | 0.2827 | 1.0347 | -0.0401 | -0.0144 | -0.3187 |
| 68 | 1 year | sheep | annual | EG | 2 |  |  |  |  | | 0.7122 |  | 0.5511 | 0.1451 | 0.7207 | -0.0279 | 0.0491 |  |
| 68 | 1 year | sheep | annual | MG | 2 |  |  |  |  | | 0.2985 |  | 0.2436 | -0.1142 | 0.2458 | -0.0119 | 0.1479 | 0.2854 |
| 68 | 1 year | sheep | annual | MG | 2 |  |  |  |  | | 0 |  | 0.2436 | 0.1895 | 0 | -0.0107 | 0.1847 | 0.2003 |
| 68 | 1 year | sheep | annual | MG | 2 |  |  |  |  | | 0.0834 |  | 0 | 0.2966 | -0.0705 | 0.0024 | -0.0989 | 0.4204 |
| 68 | 1 year | sheep | annual | MG | 2 |  |  |  |  | | 0.1542 |  | 0.603 | -0.1178 | 0 | -0.0012 | 0 | 0.2186 |
| 68 | 1 year | sheep | annual | MG | 2 |  |  |  |  | | -0.087 |  | 0.1292 | 0.3548 | -0.2981 | 0.0121 | -0.0146 | 0.1348 |
| 68 | 1 year | sheep | annual | MG | 2 |  |  |  |  | | -0.2162 |  | 0.2436 | 0.6162 | -0.049 | 0.0133 | -0.0146 | 0.2803 |
| 68 | 1 year | sheep | annual | MG | 2 |  |  |  |  | | 1.346 |  | 0.9232 | 0.2052 | 1.0091 | -0.0438 | -0.0513 | 0.3362 |
| 68 | 1 year | sheep | annual | MG | 2 |  |  |  |  | | 1.0629 |  | 0.7102 | -0.9262 | 0.782 | -0.0302 | -0.0513 | 0.4572 |
| 68 | 1 year | sheep | annual | MG | 2 |  |  |  |  | | 1.0259 |  | 0.8071 | 0.0388 | 0.8438 | -0.0327 | 0.0071 | 0.583 |
| 68 | 1 year | sheep | annual | MG | 2 |  |  |  |  | | 0.6337 |  | 0.628 | 0.0102 | 0.4556 | -0.0193 | 0.0353 |  |
| 68 | 1 year | sheep | annual | MG | 2 |  |  |  |  | | 0.3528 |  | 0.3939 | -0.0311 | 0.206 | -0.0096 | 0.0423 |  |
| 68 | 1 year | sheep | annual | MG | 2 |  |  |  |  | | 0.3254 |  | 0.4091 | 0.2902 | 0.291 | -0.006 | -0.0366 |  |
| 69 | 2-5 years | mixed | annual | EG | 3 |  |  |  |  | | -1.9009 | -0.525 | 0.1046 | -0.3686 | -0.7546 |  |  |  |
| 69 | 2-5 years | mixed | annual | EG | 3 |  |  |  |  | | -0.4947 | -0.6999 | -0.1247 | -0.3072 | -0.7175 |  |  |  |
| 69 | 2-5 years | mixed | annual | EG | 3 |  |  |  |  | | -0.5547 | -0.0225 | -0.1279 | -0.3902 | -0.6524 |  |  |  |
| 69 | 2-5 years | mixed | the growing season | HG | 3 |  |  |  |  | | -0.4258 | -0.1053 | 0.0557 | -0.1514 | -0.3261 |  |  |  |
| 69 | 2-5 years | mixed | the growing season | HG | 3 |  |  |  |  | | 0.0466 | -0.0181 | -0.0851 | -0.0432 | -0.2918 |  |  |  |
| 69 | 2-5 years | mixed | the growing season | HG | 3 |  |  |  |  | | -0.0706 | 0.1094 | -0.079 | -0.0455 | -0.4197 |  |  |  |
| 69 | 2-5 years | mixed | non-growing season | MG | 3 |  |  |  |  | | -0.071 | 0.2007 | 0.0374 | 0.0294 | -0.1505 |  |  |  |
| 69 | 2-5 years | mixed | non-growing season | MG | 3 |  |  |  |  | | 0.07 | -0.0507 | -0.0622 | -0.0694 | -0.5929 |  |  |  |
| 69 | 2-5 years | mixed | non-growing season | MG | 3 |  |  |  |  | | -0.1265 | 0.0621 | -0.0639 | -0.077 | -0.5757 |  |  |  |
| 70 | 2-5 years | mixed | annual | EG | 3 | -2.3747 | -2.0085 | 0.3663 | -2.0456 | |  |  |  |  |  |  |  |  |
| 70 | 2-5 years | mixed | the growing season | HG | 3 | -0.7173 | -0.3671 | 0.3502 | -0.4028 | |  |  |  |  |  |  |  |  |
| 70 | 2-5 years | mixed | non-growing season | MG | 3 | -0.3887 | -0.2171 | 0.1716 | -0.236 | |  |  |  |  |  |  |  |  |
| 71 | ＞5 years | sheep | the growing season | LG | 3 |  |  |  |  | | 0.2041 |  | 0.6124 |  |  | 0.0449 |  | 0.1421 |
| 71 | ＞5 years | sheep | the growing season | LG | 3 |  |  |  |  | | 0.0422 |  | 0.6807 |  |  | -0.004 |  | -0.0591 |
| 71 | ＞5 years | sheep | the growing season | MG | 3 |  |  |  |  | | -0.269 |  | 0.8292 |  |  | -0.0299 |  | -0.2083 |
| 71 | ＞5 years | sheep | the growing season | MG | 3 |  |  |  |  | | 0.1264 |  | 0.342 |  |  | 0.0045 |  | 0.0812 |
| 71 | ＞5 years | sheep | the growing season | HG | 3 |  |  |  |  | | -0.2672 |  | 0.5077 |  |  | -0.0189 |  | -0.3911 |
| 71 | ＞5 years | sheep | the growing season | HG | 3 |  |  |  |  | | 0.002 |  | 0.5807 |  |  | 0.0006 |  | -0.0288 |
| 72 | ＞5 years | sheep | the growing season | LG | 3 |  |  |  |  | | -0.0722 |  | 0.4475 |  |  |  |  |  |
| 72 | ＞5 years | sheep | the growing season | LG | 3 |  |  |  |  | | -0.1606 |  | 0.358 |  |  |  |  |  |
| 72 | ＞5 years | sheep | the growing season | LG | 3 |  |  |  |  | | 0.0426 |  | 0.3475 |  |  |  |  |  |
| 72 | ＞5 years | sheep | the growing season | MG | 3 |  |  |  |  | | -0.0654 |  | 0.4356 |  |  |  |  |  |
| 72 | ＞5 years | sheep | the growing season | MG | 3 |  |  |  |  | | -0.1382 |  | 0.3067 |  |  |  |  |  |
| 72 | ＞5 years | sheep | the growing season | MG | 3 |  |  |  |  | | -0.0354 |  | 0.0904 |  |  |  |  |  |
| 72 | ＞5 years | sheep | the growing season | HG | 3 |  |  |  |  | | -0.1138 |  | 0.5253 |  |  |  |  |  |
| 72 | ＞5 years | sheep | the growing season | HG | 3 |  |  |  |  | | -0.2151 |  | 0.175 |  |  |  |  |  |
| 72 | ＞5 years | sheep | the growing season | HG | 3 |  |  |  |  | | -0.1102 |  | -0.0858 |  |  |  |  |  |
| 73 | ＞5 years | mixed | annual | LG | 3 |  |  |  |  | | -0.0941 | -0.0552 | 0.3167 | 0.0402 | -0.0872 | 0.0093 |  |  |
| 73 | ＞5 years | mixed | annual | LG | 3 |  |  |  |  | | -0.0834 | -0.0812 | 0.3964 | 0.095 | -0.2218 | 0.0184 |  |  |
| 73 | ＞5 years | mixed | annual | LG | 3 |  |  |  |  | | -0.0973 | -0.0071 | 0.2854 | 0.0535 | -0.0467 | 0.0013 |  |  |
| 73 | ＞5 years | mixed | annual | LG | 3 |  |  |  |  | | -0.0441 | -0.0173 | 0.5967 | 0.0372 | -0.1265 | 0.0079 |  |  |
| 73 | ＞5 years | mixed | annual | LG | 3 |  |  |  |  | | -0.1264 | -0.0747 | 0.3222 | 0.0884 | -0.2 | 0.0039 |  |  |
| 73 | ＞5 years | mixed | annual | LG | 3 |  |  |  |  | | -0.1164 | -0.1354 | 0.2803 | 0.0287 | -0.1892 | -0.0013 |  |  |
| 73 | ＞5 years | mixed | annual | MG | 3 |  |  |  |  | | -0.1625 | -0.084 | 0.2064 | -0.009 | -0.5307 | 0.0468 |  |  |
| 73 | ＞5 years | mixed | annual | MG | 3 |  |  |  |  | | -0.1155 | -0.157 | 0.3951 | -0.0242 | -0.607 | 0.0617 |  |  |
| 73 | ＞5 years | mixed | annual | MG | 3 |  |  |  |  | | -0.2471 | -0.1536 | 0.2836 | -0.021 | -0.1732 | 0.0145 |  |  |
| 73 | ＞5 years | mixed | annual | MG | 3 |  |  |  |  | | -0.2373 | -0.2155 | 0.6431 | -0.0324 | -0.2375 | 0.026 |  |  |
| 73 | ＞5 years | mixed | annual | MG | 3 |  |  |  |  | | -0.3086 | -0.1085 | 0.1923 | -0.0222 | -0.8295 | 0.013 |  |  |
| 73 | ＞5 years | mixed | annual | MG | 3 |  |  |  |  | | -0.2284 | -0.1567 | 0.1193 | -0.0861 | -0.8014 | 0.0154 |  |  |
| 73 | ＞5 years | mixed | annual | HG | 3 |  |  |  |  | | -0.2247 | -0.1576 | 0.4557 | -0.1358 | -0.7286 | 0.0732 |  |  |
| 73 | ＞5 years | mixed | annual | HG | 3 |  |  |  |  | | -0.4869 | -0.1915 | 0.5756 | -0.0775 | -0.9602 | 0.0741 |  |  |
| 73 | ＞5 years | mixed | annual | HG | 3 |  |  |  |  | | -0.354 | -0.1886 | 0.5467 | -0.0565 | -0.4311 | 0.0744 |  |  |
| 73 | ＞5 years | mixed | annual | HG | 3 |  |  |  |  | | -0.2407 | -0.3308 | 0.8885 | -0.1988 | -0.5685 | 0.0725 |  |  |
| 73 | ＞5 years | mixed | annual | HG | 3 |  |  |  |  | | -0.5151 | -0.2669 | 0.5351 | -0.2234 | -0.9446 | 0.0472 |  |  |
| 73 | ＞5 years | mixed | annual | HG | 3 |  |  |  |  | | -0.6212 | -0.2128 | 0.6125 | -0.2759 | -1.085 | 0.0468 |  |  |
| 74 | ＞5 years | sheep | the growing season | LG | 3 | -0.1151 | -0.502 | -0.3313 | -0.4448 | |  |  |  |  |  |  |  |  |
| 74 | ＞5 years | sheep | the growing season | LG | 3 |  | -0.3953 |  |  | |  |  |  |  |  |  |  |  |
| 74 | ＞5 years | sheep | the growing season | LG | 3 |  | -0.335 |  |  | |  |  |  |  |  |  |  |  |
| 74 | ＞5 years | sheep | the growing season | LG | 3 |  | -0.5977 |  |  | |  |  |  |  |  |  |  |  |
| 74 | ＞5 years | sheep | the growing season | LG | 3 |  | -0.4464 |  |  | |  |  |  |  |  |  |  |  |
| 74 | ＞5 years | sheep | the growing season | MG | 3 | 0.8455 | -0.1608 | -1.0597 | -0.2067 | |  |  |  |  |  |  |  |  |
| 74 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.1759 |  |  | |  |  |  |  |  |  |  |  |
| 74 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.641 |  |  | |  |  |  |  |  |  |  |  |
| 74 | ＞5 years | sheep | the growing season | MG | 3 |  | 0.1882 |  |  | |  |  |  |  |  |  |  |  |
| 74 | ＞5 years | sheep | the growing season | MG | 3 |  | -0.2141 |  |  | |  |  |  |  |  |  |  |  |
| 74 | ＞5 years | sheep | the growing season | HG | 3 | 0.7665 | -0.0248 | -0.7374 | 0.0333 | |  |  |  |  |  |  |  |  |
| 74 | ＞5 years | sheep | the growing season | HG | 3 |  | 0.0722 |  |  | |  |  |  |  |  |  |  |  |
| 74 | ＞5 years | sheep | the growing season | HG | 3 |  | 0.0106 |  |  | |  |  |  |  |  |  |  |  |
| 74 | ＞5 years | sheep | the growing season | HG | 3 |  | 0.3315 |  |  | |  |  |  |  |  |  |  |  |
| 74 | ＞5 years | sheep | the growing season | HG | 3 |  | 0.029 |  |  | |  |  |  |  |  |  |  |  |
| 75 | 2-5 years | sheep | non-growing season | LG | 3 | 0.5837 |  |  |  | |  |  |  |  |  |  |  |  |
| 75 | 2-5 years | sheep | non-growing season | LG | 3 | 0.6521 |  |  |  | |  |  |  |  |  |  |  |  |
| 75 | 2-5 years | sheep | non-growing season | LG | 3 | 0.0777 |  |  |  | |  |  |  |  |  |  |  |  |
| 75 | 2-5 years | sheep | non-growing season | LG | 3 | 0.1915 |  |  |  | |  |  |  |  |  |  |  |  |
| 75 | 2-5 years | sheep | non-growing season | LG | 3 | 0.3454 |  |  |  | |  |  |  |  |  |  |  |  |
| 75 | 2-5 years | sheep | non-growing season | MG | 3 | 0.7243 |  |  |  | |  |  |  |  |  |  |  |  |
| 75 | 2-5 years | sheep | non-growing season | MG | 3 | 0.6297 |  |  |  | |  |  |  |  |  |  |  |  |
| 75 | 2-5 years | sheep | non-growing season | MG | 3 | 0.4552 |  |  |  | |  |  |  |  |  |  |  |  |
| 75 | 2-5 years | sheep | non-growing season | MG | 3 | 0.2495 |  |  |  | |  |  |  |  |  |  |  |  |
| 75 | 2-5 years | sheep | non-growing season | MG | 3 | 0.1593 |  |  |  | |  |  |  |  |  |  |  |  |
| 75 | 2-5 years | sheep | non-growing season | HG | 3 | 0.782 |  |  |  | |  |  |  |  |  |  |  |  |
| 75 | 2-5 years | sheep | non-growing season | HG | 3 | 0.4864 |  |  |  | |  |  |  |  |  |  |  |  |
| 75 | 2-5 years | sheep | non-growing season | HG | 3 | 0.1735 |  |  |  | |  |  |  |  |  |  |  |  |
| 75 | 2-5 years | sheep | non-growing season | HG | 3 | 0.0582 |  |  |  | |  |  |  |  |  |  |  |  |
| 75 | 2-5 years | sheep | non-growing season | HG | 3 | 0.0544 |  |  |  | |  |  |  |  |  |  |  |  |
| 76 | 2-5 years | mixed | annual | LG | 3 | -0.4428 |  |  |  | | -0.0791 | 0 | 0.1999 | 0.5457 |  | -0.0346 | 0.0335 |  |
| 76 | 2-5 years | mixed | annual | MG | 3 | -0.7036 |  |  |  | | -0.1146 | 0.277 | 0.4532 | 0.8361 |  | -0.0354 | 0.6741 |  |
| 76 | 2-5 years | mixed | annual | HG | 3 | -0.9391 |  |  |  | | -0.1355 | 0.2607 | 0.7997 | 0.0249 |  | 0.096 | 0.1441 |  |
| 77 | 2-5 years | sheep | the growing season | LG | 3 | 0.131 | -0.4797 | -0.6923 | -0.2546 | |  |  |  |  |  |  |  |  |
| 77 | 2-5 years | sheep | the growing season | LG | 3 |  | 0.2558 |  |  | |  |  |  |  |  |  |  |  |
| 77 | 2-5 years | sheep | the growing season | LG | 3 |  | 0.0151 |  |  | |  |  |  |  |  |  |  |  |
| 77 | 2-5 years | sheep | the growing season | LG | 3 |  | -0.3469 |  |  | |  |  |  |  |  |  |  |  |
| 77 | 2-5 years | sheep | the growing season | MG | 3 | 0.2288 | -0.2112 | -0.3183 | -0.1234 | |  |  |  |  |  |  |  |  |
| 77 | 2-5 years | sheep | the growing season | MG | 3 |  | -0.1005 |  |  | |  |  |  |  |  |  |  |  |
| 77 | 2-5 years | sheep | the growing season | MG | 3 |  | 0.367 |  |  | |  |  |  |  |  |  |  |  |
| 77 | 2-5 years | sheep | the growing season | MG | 3 |  | -0.159 |  |  | |  |  |  |  |  |  |  |  |
| 77 | 2-5 years | sheep | the growing season | HG | 3 | -0.1642 | -0.3719 | -0.336 | -0.2436 | |  |  |  |  |  |  |  |  |
| 77 | 2-5 years | sheep | the growing season | HG | 3 |  | 0.1799 |  |  | |  |  |  |  |  |  |  |  |
| 77 | 2-5 years | sheep | the growing season | HG | 3 |  | -0.034 |  |  | |  |  |  |  |  |  |  |  |
| 77 | 2-5 years | sheep | the growing season | HG | 3 |  | -0.2816 |  |  | |  |  |  |  |  |  |  |  |
| 78 | 2-5 years | sheep | annual | LG | 3 |  |  |  |  | | -0.0923 |  |  |  |  | 0.0299 | -0.04 | -0.0859 |
| 78 | 2-5 years | sheep | annual | LG | 3 |  |  |  |  | | 0.0393 |  |  |  |  | -0.0323 | 0.1953 | -0.2329 |
| 78 | 2-5 years | sheep | annual | LG | 3 |  |  |  |  | | 0.02 |  |  |  |  | 0.0301 | 0.0681 | 0.0126 |
| 78 | 2-5 years | sheep | annual | LG | 3 |  |  |  |  | | -0.0238 |  |  |  |  | 0.0273 | 0.0548 | -0.1299 |
| 78 | 2-5 years | sheep | annual | LG | 3 |  |  |  |  | | -0.1019 |  |  |  |  | 0.0135 | 0.0244 | 0.0241 |
| 78 | 2-5 years | sheep | annual | LG | 3 |  |  |  |  | | 0.0135 |  |  |  |  | 0.0135 | -0.0124 | -0.0419 |
| 78 | 2-5 years | sheep | annual | MG | 3 |  |  |  |  | | 0.0947 |  |  |  |  | 0.0401 | 0.2729 | -0.1978 |
| 78 | 2-5 years | sheep | annual | MG | 3 |  |  |  |  | | 0.0853 |  |  |  |  | 0.0538 | -0.0883 | -0.0609 |
| 78 | 2-5 years | sheep | annual | MG | 3 |  |  |  |  | | 0.0058 |  |  |  |  | 0.0162 | -0.0506 | 0.0634 |
| 78 | 2-5 years | sheep | annual | HG | 3 |  |  |  |  | | -0.0459 |  |  |  |  | 0.0225 | 0.0755 | -0.2885 |
| 78 | 2-5 years | sheep | annual | HG | 3 |  |  |  |  | | -0.0342 |  |  |  |  | 0.043 | 0.2729 | -0.2174 |
| 78 | 2-5 years | sheep | annual | HG | 3 |  |  |  |  | | -0.0118 |  |  |  |  | 0.0427 | 0.1318 | -0.09 |
| 78 | 2-5 years | sheep | annual | HG | 3 |  |  |  |  | | -0.0394 |  |  |  |  | 0.0413 | 0.18 | -0.1648 |
| 78 | 2-5 years | sheep | annual | HG | 3 |  |  |  |  | | -0.0702 |  |  |  |  | 0.0135 | 0.0715 | 0.0008 |
| 78 | 2-5 years | sheep | annual | HG | 3 |  |  |  |  | | -0.1413 |  |  |  |  | 0.0162 | -0.0124 | -0.0517 |
| 79 | 2-5 years | cattle | the growing season | MG | 6 | -0.6051 | -0.5258 | -0.2149 | -0.7707 | |  |  |  |  |  |  |  |  |
| 79 | 2-5 years | cattle | the growing season | MG | 6 |  | -1.6155 |  |  | |  |  |  |  |  |  |  |  |
| 79 | 2-5 years | cattle | the growing season | MG | 6 |  | -1.515 |  |  | |  |  |  |  |  |  |  |  |
| 79 | 2-5 years | mixed | annual | EG | 6 | -1.1494 | -1.369 | -0.2606 | -1.349 | |  |  |  |  |  |  |  |  |
| 79 | 2-5 years | mixed | annual | EG | 6 |  | -1.514 |  |  | |  |  |  |  |  |  |  |  |
| 79 | 2-5 years | mixed | annual | EG | 6 |  | -1.4207 |  |  | |  |  |  |  |  |  |  |  |
| 79 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | | 0.2851 | 0.1178 |  |  | 0.1907 | 0.0094 | -0.0517 |  |
| 79 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | | 0.203 | 0.0308 |  |  | 0.1196 | -0.0314 | 0.0084 |  |
| 79 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | | 0.0141 | 0.1335 |  |  | 0.049 | 0.0067 | -0.0079 |  |
| 79 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | | 0.1075 | 0 |  |  | 0.1594 | -0.0122 | 0 |  |
| 79 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | | 0.1409 | 0.1823 |  |  | 0.135 | -0.0154 | -0.0083 |  |
| 79 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | | 0.0575 | -0.069 |  |  | 0.0304 | -0.0573 | -0.0167 |  |
| 79 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | | -0.0778 | -0.2384 |  |  | -0.1556 | 0.0154 | 0.1236 |  |
| 79 | 2-5 years | sheep | the growing season | LG | 3 |  |  |  |  | | 0.3941 | 0.3321 |  |  | 0.3636 | 0.0056 | -0.0267 |  |
| 79 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | | -0.196 | -0.1335 |  |  | -0.102 | -0.0067 | 0.0884 |  |
| 79 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | | -0.2284 | -0.0984 |  |  | -0.2188 | -0.0652 | 0.0729 |  |
| 79 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | | 0.0619 | 0 |  |  | -0.0692 | -0.1022 | -0.0239 |  |
| 79 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | | 0.0071 | -0.0741 |  |  | -0.1409 | -0.0413 | 0.031 |  |
| 79 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | | 0.1856 | -0.069 |  |  | 0.2089 | 0.0056 | -0.0336 |  |
| 79 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | | 0.0699 | 0.1252 |  |  | -0.044 | -0.0544 | 0.0082 |  |
| 79 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | | 0.0135 | -0.2007 |  |  | -0.1608 | 0.0929 | 0.1158 |  |
| 79 | 2-5 years | sheep | the growing season | MG | 3 |  |  |  |  | | 0.091 | -0.1292 |  |  | 0.0718 | 0.112 | 0.1313 |  |
| 79 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | | -0.1343 | 0 |  |  | -0.0191 | 0.0239 | -0.0084 |  |
| 79 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | | 0.046 | 0.0606 |  |  | 0.0288 | -0.0314 | 0.0249 |  |
| 79 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | | 0.1929 | 0.1335 |  |  | 0.3054 | -0.0484 | -0.0484 |  |
| 79 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | | 0.1075 | -0.2412 |  |  | 0.0087 | -0.0655 | -0.0079 |  |
| 79 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | | 0.0941 | -0.0339 |  |  | 0.1083 | -0.0558 | -0.0251 |  |
| 79 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | | 0.1579 | -0.069 |  |  | 0.2169 | -0.0618 | 0.0325 |  |
| 79 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | | 0.2081 | -0.0953 |  |  | -0.0213 | 0.0428 | 0.1765 |  |
| 79 | 2-5 years | sheep | the growing season | HG | 3 |  |  |  |  | | 0.1857 | -0.2384 |  |  |  | -0.0099 | 0.076 |  |
| 80 | 1 year | mixed | the growing season | LG | 3 | -0.2645 |  | 0.5332 | 0.0531 | |  |  |  |  |  |  |  |  |
| 80 | 1 year | mixed | the growing season | LG | 3 | -0.1732 |  | 0.7386 | 0.061 | |  |  |  |  |  |  |  |  |
| 80 | 1 year | mixed | the growing season | LG | 3 | -0.2042 |  | 0.6049 | -0.0478 | |  |  |  |  |  |  |  |  |
| 80 | 1 year | mixed | the growing season | LG | 3 | -0.3636 |  | 1.4906 | -0.1772 | |  |  |  |  |  |  |  |  |
| 80 | 1 year | mixed | the growing season | LG | 3 | -0.2427 |  | 0.9475 | -0.1629 | |  |  |  |  |  |  |  |  |
| 80 | 1 year | mixed | the growing season | MG | 3 | -0.5682 |  | 0.3143 | -0.3893 | |  |  |  |  |  |  |  |  |
| 80 | 1 year | mixed | the growing season | MG | 3 | -0.4256 |  | 0.4068 | -0.3112 | |  |  |  |  |  |  |  |  |
| 80 | 1 year | mixed | the growing season | MG | 3 | -0.5381 |  | 0.3572 | -0.4542 | |  |  |  |  |  |  |  |  |
| 80 | 1 year | mixed | the growing season | MG | 3 | -0.6036 |  | 0.3965 | -0.575 | |  |  |  |  |  |  |  |  |
| 80 | 1 year | mixed | the growing season | MG | 3 | -0.5224 |  | 0.351 | -0.5005 | |  |  |  |  |  |  |  |  |
| 80 | 1 year | mixed | the growing season | HG | 3 | -0.956 |  | 0.0041 | -0.9538 | |  |  |  |  |  |  |  |  |
| 80 | 1 year | mixed | the growing season | HG | 3 | -0.8887 |  | 0.1334 | -0.8548 | |  |  |  |  |  |  |  |  |
| 80 | 1 year | mixed | the growing season | HG | 3 | -0.9225 |  | -0.6025 | -1.0193 | |  |  |  |  |  |  |  |  |
| 80 | 1 year | mixed | the growing season | HG | 3 | -1.1218 |  | 0.8025 | -1.051 | |  |  |  |  |  |  |  |  |
| 80 | 1 year | mixed | the growing season | HG | 3 | -0.9627 |  | 0.3526 | -0.9408 | |  |  |  |  |  |  |  |  |
| 81 | ＞5 years | mixed | annual | LG | 3 | -0.4468 | 0.0985 | 0.5855 | 0.1268 | |  |  |  |  |  |  | -0.4712 |  |
| 81 | ＞5 years | mixed | annual | LG | 3 |  | 0.1968 |  |  | |  |  |  |  |  |  | -0.3391 |  |
| 81 | ＞5 years | mixed | annual | LG | 3 |  | 0.1188 |  |  | |  |  |  |  |  |  |  |  |
| 81 | ＞5 years | mixed | annual | LG | 3 |  | 0.1722 |  |  | |  |  |  |  |  |  |  |  |
| 81 | ＞5 years | mixed | annual | LG | 3 |  | 0.2051 |  |  | |  |  |  |  |  |  |  |  |
| 81 | ＞5 years | mixed | annual | MG | 3 | -0.8199 | 0.0394 | 0.7512 | -0.0829 | |  |  |  |  |  |  | -1.0478 |  |
| 81 | ＞5 years | mixed | annual | MG | 3 |  | -0.0002 |  |  | |  |  |  |  |  |  |  |  |
| 81 | ＞5 years | mixed | annual | MG | 3 |  | -0.2027 |  |  | |  |  |  |  |  |  |  |  |
| 81 | ＞5 years | mixed | annual | MG | 3 |  | -0.2635 |  |  | |  |  |  |  |  |  |  |  |
| 81 | ＞5 years | mixed | annual | MG | 3 |  | -0.3959 |  |  | |  |  |  |  |  |  |  |  |
| 81 | ＞5 years | mixed | annual | HG | 3 | -2.1613 | 0.0418 | 2.0512 | -0.1335 | |  |  |  |  |  |  |  |  |
| 81 | ＞5 years | mixed | annual | HG | 3 |  | 0.008 |  |  | |  |  |  |  |  |  |  |  |
| 81 | ＞5 years | mixed | annual | HG | 3 |  | -0.4892 |  |  | |  |  |  |  |  |  |  |  |
| 81 | ＞5 years | mixed | annual | HG | 3 |  | -0.3674 |  |  | |  |  |  |  |  |  |  |  |
| 81 | ＞5 years | mixed | annual | HG | 3 |  | -0.3714 |  |  | |  |  |  |  |  |  |  |  |
| 82 | 2-5 years | cattle | the growing season | LG | 3 | -0.4833 |  |  |  | | -0.1365 |  |  |  |  |  |  |  |
| 82 | 2-5 years | cattle | the growing season | LG | 3 | -0.3561 |  |  |  | | -0.0669 |  |  |  |  |  |  |  |
| 82 | 2-5 years | cattle | the growing season | LG | 3 | -0.4716 |  |  |  | | -0.0572 |  |  |  |  |  |  |  |
| 82 | 2-5 years | cattle | the growing season | MG | 3 | -0.3188 |  |  |  | | -0.1027 |  |  |  |  |  |  |  |
| 82 | 2-5 years | cattle | the growing season | MG | 3 | -0.5636 |  |  |  | | -0.0669 |  |  |  |  |  |  |  |
| 82 | 2-5 years | cattle | the growing season | MG | 3 | -0.7612 |  |  |  | | -0.0733 |  |  |  |  |  |  |  |
| 82 | 2-5 years | cattle | the growing season | HG | 3 | -0.3266 |  |  |  | | -0.07 |  |  |  |  |  |  |  |
| 82 | 2-5 years | cattle | the growing season | HG | 3 | -0.6982 |  |  |  | | -0.0881 |  |  |  |  |  |  |  |
| 82 | 2-5 years | cattle | the growing season | HG | 3 | -0.7501 |  |  |  | | -0.0204 |  |  |  |  |  |  |  |
| 83 | ＞5 years | sheep | annual | MG | 3 |  |  |  |  | | 0.123 | -0.0378 | 0.0655 | -0.0461 | -0.0845 | 0.0314 |  | -0.1894 |
| 83 | ＞5 years | sheep | annual | MG | 3 |  |  |  |  | | 0.1438 | -0.0718 | -0.5348 | -0.2155 | -0.0728 | 0.0753 |  | 0.0825 |
| 83 | ＞5 years | sheep | annual | MG | 3 |  |  |  |  | | -0.3664 | -0.3462 | -0.1362 | 0.2657 | -0.2396 | 0.1542 |  | -0.3998 |
| 83 | ＞5 years | sheep | annual | MG | 3 |  |  |  |  | | -0.1688 | -0.394 | -0.3733 | -0.4532 | -0.0855 | 0.1171 |  | -0.348 |
| 83 | ＞5 years | sheep | annual | MG | 3 |  |  |  |  | | -0.1897 | -0.1025 | 0.6239 | -0.0221 | -0.1552 | 0.1082 |  | -0.1483 |
| 83 | ＞5 years | sheep | annual | MG | 3 |  |  |  |  | | -0.1795 | -0.1415 | 0.2533 | -0.85 | -0.1298 | 0.2393 |  | -0.0384 |
| 84 | ＞5 years | mixed | the growing season | EG | 3 |  |  |  |  | | -0.0741 | 0.1457 | -0.0576 | -0.0955 |  |  |  |  |
| 84 | ＞5 years | mixed | the growing season | EG | 3 |  |  |  |  | | 0.2364 | 0.2278 | 0.0075 | 0.0488 |  |  |  |  |
| 84 | ＞5 years | mixed | the growing season | EG | 3 |  |  |  |  | | 0.3365 | 0.1542 | -0.0074 | 0.1465 |  |  |  |  |
| 85 | ＞5 years | mixed | the growing season | MG | 3 | -0.7678 |  |  |  | | -0.3076 | -0.108 |  |  | -0.3266 |  | 0.2025 |  |
| 85 | ＞5 years | mixed | the growing season | MG | 3 |  |  |  |  | | -0.42 | -0.1684 |  |  | -0.3751 |  | 0.1484 |  |
| 85 | ＞5 years | mixed | the growing season | MG | 3 |  |  |  |  | | -0.3699 | -0.12 |  |  | -0.3202 |  | 0.0918 |  |
| 85 | ＞5 years | mixed | the growing season | MG | 3 |  |  |  |  | | -0.3052 | -0.1116 |  |  | -0.285 |  | 0.0651 |  |
| 85 | ＞5 years | mixed | the growing season | MG | 3 |  |  |  |  | | -0.1746 | -0.1394 |  |  | -0.2317 |  | 0.0274 |  |
| 86 | 2-5 years | mixed | annual | EG | 3 | -0.803 |  |  |  | | -0.3007 | -0.1691 |  |  |  |  | 0.1324 | -0.08 |
| 86 | 2-5 years | mixed | annual | EG | 3 |  |  |  |  | | -0.0359 | -0.0488 |  |  |  |  | 0.0085 | -0.0182 |
| 86 | 2-5 years | mixed | annual | EG | 3 |  |  |  |  | | -0.0238 | -0.0645 |  |  |  |  | 0.0079 | -0.0185 |

Appendix S1. A list of 86 articles from which data were extracted for the meta-analysis

1 Sun, Y. et al. Responses of soil ammonia oxidizers and denitrifiers to different grazing intensities. Acta Ecologica Sinica (2018).

2 Wang, X. et al. Effects of grazing on nitrogen transformation in swamp meadow wetland soils in Napahai of Northwest Yunnan. Acta Ecologica Sinica (2018).

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5 Jin, J. et al. Soil nitrogen and Stipa krylovii roots in desert steppe in response to different grazing treatments. Chinese Journal of Ecology (2017).

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