**Breeding in an agricultural landscape: conservation actions increase nest survival in a ground-nesting bird**

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## Supplementary table 1. Agricultural habitat types of Collared Pratincole *Glareola pratincola* in Hungary.

|  |  |  |
| --- | --- | --- |
| Habitat | Characteristics of preparation and treatment | Examples |
| **Row crops** | Planted in wide rows, intesive land use with pesticides and row cultivation | corn, sorghum, sunflower |
| **Spring cover crops** | Planted in narrow rows, less intense land use by chemicalization | Alexandra-clover, alfalfa, barley, millet, oat, phacelia  |
| **Fallow lands** | Created by disc ploughing, there aren’t any disturbance by agricultural machineries | dry paddies, rested areas |

Supplementary table 2. Number of hatched nests, proportion of exposure days, daily and total nest survival probabilitiesduring the study period.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Row crops | Spring cover crops | Fallow lands |
|  | No. Nests | No. of hatched nests | Exposure (days) | Daily nest survival | Total nest survival rate (%) | No. nests | No. of hatched nests | Exposure (days) | Daily nest survival | Total nest survival rate (%) | No. nests | No. of hatched nests | Exposure (days) | Daily nest survival | Total nest survival rate (%) |
| 2012 | 14 | 0 | 139.5 | 0.9 | 0.7 | 7 | 2 | 33 | 0.85 | < 0.01 | 3 | 1 | 30 | 0.93 | 4 |
| 2013 | 9 | 5 | 142.5 | 0.97 | 26.6 | 3 | 2 | 40.5 | 0.98 | 31.2 | 4 | 4 | 6 | 1 | 100 |
| 2014 | 3 | 0 | 10 | 0.7 | < 0.01 | 6 | 3 | 47 | 0.94 | 4.7 | 5 | 5 | 79 | 1 | 100 |
| 2015 | 21 | 10 | 216.5 | 0.95 | 8.9 | 8 | 7 | 90.5 | 0.99 | 59.7 | 9 | 7 | 56.5 | 0.96 | 18.7 |
| 2016 | 24 | 18 | 309 | 0.98 | 40.2 | 15 | 7 | 99 | 0.92 | 1.9 | 7 | 5 | 70 | 0.97 | 25.9 |
| 2017 | 12 | 8 | 170.5 | 0.98 | 31.5 | 10 | 9 | 170.5 | 0.99 | 76 | 27 | 20 | 274 | 0.97 | 30 |
| 2018 | 17 | 12 | 215.5 | 0.98 | 33.1 | 2 | 2 | 36 | 1 | 100 | 15 | 12 | 135.5 | 0.98 | 35.3 |
| 2019 | 17 | 8 | 192.5 | 0.95 | 10.8 | 1 | 0 | 3 | 0.67 | < 0.01 | 3 | 2 | 50.5 | 0.98 | 39.4 |
| 2020 | 9 | 9 | 136 | 1 | 100 | 16 | 15 | 185.5 | 0.99 | 77.7 | 8 | 5 | 50 | 0.94 | 5.6 |
| 2021 | 26 | 24 | 356 | 0.99 | 76.9 | 4 | 3 | 32.5 | 0.97 | 23.4 | 10 | 8 | 168.5 | 0.99 | 57.4 |
| *Mean daily nest survival rate* | 0.94 |  |  |  |  | 0.93 |  |  |  |  | 0.97 |  |

Supplementary table 3. Nest fates, exposure days, daily and total nest survival rate probabilities of Collared Pratincoles.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Year | Hatched (%) | Predated (%) | Abandoned (%) | Flooded (%) | Unknown (%) | Agricultural activities (%) | Exposure (days) | Daily nest survival rate | Total nest survival rate (%) |
| 2012 | 13 | 71 | 0 | 17 | 0 | 0 | 202.5 | 0.9 | 0.6 |
| 2013 | 68 | 12 | 14 | 6 | 0 | 0 | 189 | 0.97 | 22.3 |
| 2014 | 57 | 14 | 7 | 22 | 0 | 0 | 136 | 0.96 | 12.3 |
| 2015 | 63 | 26 | 11 | 0 | 0 | 0 | 363.5 | 0.96 | 16.1 |
| 2016 | 66 | 9 | 4 | 17 | 2 | 2 | 478 | 0.97 | 20.5 |
| 2017 | 76 | 16 | 8 | 0 | 0 | 0 | 615 | 0.98 | 40 |
| 2018 | 76 | 21 | 3 | 0 | 0 | 0 | 387 | 0.98 | 37.9 |
| 2019 | 48 | 24 | 19 | 9 | 0 | 0 | 246 | 0.96 | 11.9 |
| 2020 | 88 | 3 | 9 | 0 | 0 | 0 | 371.5 | 0.99 | 60.5 |
| 2021 | 88 | 7 | 5 | 0 | 0 | 0 | 557 | 0.99 | 65.8 |

Supplementary figure 1. Phenology of nest hatching events during a breeding season in various agricultural habitats (n=212).



**References**