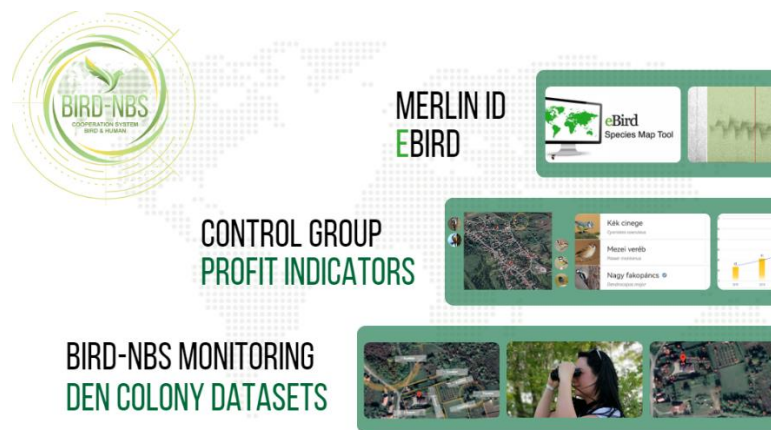
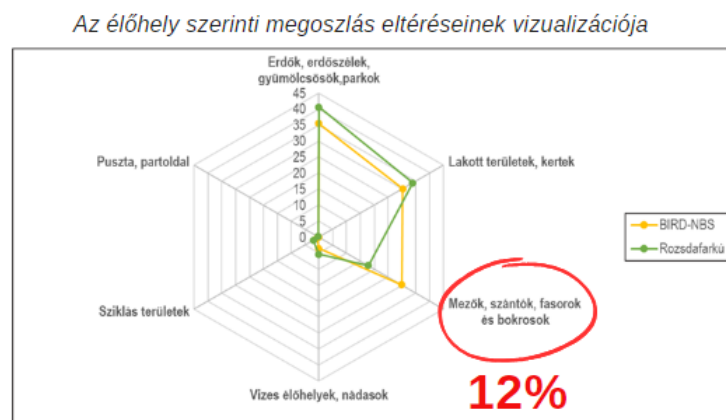


Some important data and results from the research

In 2022 and 2023, we conducted research in the area of the Bird-Nest Box Station and also conducted a control group research in a 3-kilometer radius of the center. We monitored the bird species observed in the area, and then analyzed the data series of the aviary from the past years: occupancy results, hatchlings, etc. We have also carried out a specific benefit index calculation, so that we can show in numbers the extent of ecosystem services provided by birds in terms of agricultural production activity. We completed a total of 1,923 sightings during 167 surveys. After highlighting the repetitions, a total of 101 species were included in the sample - that's how many species we were able to identify in the entire survey area.



We have also prepared statements according to the typical habitat. The biggest difference was observed in the case of the species of fields, fields, tree rows and bushes: in the area of the Bird-Nest Box Station their proportion is almost 30%, while in the case of the control site it is not quite 18%. This means a difference of 12%, which can be considered significant. If we add to this the research-proven fact that the negative processes affecting the bird population affect the areas strongly connected to agriculture to the greatest extent, then the results of the farm in this area are even more important.



A total of 21 nesting species were recorded in the area of the Bird-Nest Box Station during the six months of the research - this is more than 24% of the surveyed species. Therefore, almost a quarter of

the surveyed species were den dwellers, which also means that our artificial dens play an important role in the prosperity of the bird community in the area.

The distribution of species according to habitat type is balanced: it suggests that the den colony and the related bird-friendly practices are able to create an environment in which most of the bird species of different categories find their suitable habitat.

Seven burrowing species were also among the twenty most observed species, which clearly proves the need to apply bird protection practices.

Sparrows are only in the sixth and seventh place - there is no sparrow dominance - this also suggests the free availability of ecological niches, which indicates that the area is able to provide the two most decisive conditions that trigger competition: food and living/nesting place.

In the first 11 places, the species with high ecological benefits according to the literature are listed: greenfinch, european goldfinch, blackbird, tit, etc.

According to the nesting data of the nest-box station, most of our fledgling chicks come from tit. The analysis of the data revealed that during the rearing of three titmice nests, the titmice could have killed more than 70,000 insects in the area. The literature says that, on average, at least 30% of the insects killed are pests, so even with the lowest values, we can thank the nestlings of three tit pairs for the destruction of nearly 13,000 pests, which can be more than 21,000 if you count three insects and 22 brood-rearing days. However, if we consider the possible values rather than the minimum, then raising the three nests may have contributed to the destruction of more than 40,000 pests.

A széncinege várható predációs eredményei a fiókanevelés időszakában

| EGY FÉSZEKALJ ESETÉN | | | | | | |
|------------------------|-----------------------|------------------------|--|--|--|--|
| Alkalom/nap | Rovarak száma/alkalom | Fiókanevelés ideje/nap | Elpusztított rovarok és pókok száma összesen | Ebből kártevő (30%-os értékkel számolva) | Ebből kártevő (50%-os értékkel számolva) | Ebből kártevő (60%-os értékkel számolva) |
| 360 | 2 | 20 | 14400 | 4320 | 7200 | 8640 |
| 360 | 2 | 21 | 15120 | 4536 | 7560 | 9072 |
| 360 | 2 | 22 | 15840 | 4752 | 7920 | 9504 |
| 360 | 3 | 20 | 21600 | 6480 | 10800 | 12960 |
| 360 | 3 | 21 | 22680 | 6804 | 11340 | 13608 |
| 360 | 3 | 22 | 23760 | 7128 | 11880 | 14256 |
| HÁROM FÉSZEKALJ ESETÉN | | | | | | |
| Alkalom/nap | Rovarak száma/alkalom | Fiókanevelés ideje/nap | Elpusztított rovarok és pókok száma összesen | Ebből kártevő (30%-os értékkel számolva) | Ebből kártevő (50%-os értékkel számolva) | Ebből kártevő (60%-os értékkel számolva) |
| 360 | 2 | 20 | 43200 | 12960 | 21600 | 25920 |
| 360 | 2 | 21 | 45360 | 13608 | 22680 | 27216 |
| 360 | 2 | 22 | 47520 | 14256 | 23760 | 28512 |
| 360 | 3 | 20 | 64800 | 19440 | 32400 | 38880 |
| 360 | 3 | 21 | 68040 | 20412 | 34020 | 40824 |
| 360 | 3 | 22 | 71280 | 21384 | 35640 | 42768 |

My experiences and conclusions:

The results of the control group study and the own monitoring survey also confirmed the ability of bird-friendly production practices to increase diversity and the positive effect on the long-term presence of bird species.

In the results, the positive effect of bird-friendly practices on the bird species associated with agricultural areas and the significant role it plays in the well-being of nest-dwelling species occupy a prominent place.

I was able to prove the increasingly indispensable role of artificial burrows in the life of burrow-dwelling species, and the numbers of predation indicators were vivid examples of the importance of the ecosystem services provided by birds.

I have been monitoring the changes in the area and its communities for nearly a decade, and according to my observations, bird-friendly practices have a significant effect in supporting biodiversity and ecosystem restoration. As can be seen from the literature sources described: our birds play an indispensable role in the practice of sustainable production.

All in all, I think that in a production practice based on bird-human cooperation, a win-win situation can be realized in the long term, and a more comprehensive research of the possibilities inherent in cooperation can lead to the birth of a new agroecological trend.

