

## The introduction of honey bees – in reducing the biodiversity of pollinators

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### INTRODUCTION & AIM

In Russia in the last century, *A.m. mellifera* L. (60%), *A.m. caucasica* Gorb. (12%), *A.m. rempies* (5%), *A.m. carpatica* Avet. (18%), and Far-East bee (5%) were mainly bred—the number of bee colonies was 10 million. In modern beekeeping, as a result of mass introduction, there has been a change in the gene pool of honey bees and an increase in the death of bee colonies, which entails a reduction in pollinators.

### METHOD

Was conducted between 2000 and 2024:

**560 apiaries( from 56 regions)**  
**6590 bee colony**

- morpho-phenotypic characteristics
- biological characteristics (A. Alpatov (1948); F.Ruttner (2006).

**1.5 thousand beekeepers**

- Online application form, the objectives of the survey are to find out the death of bee colonies and the causes.

### CONCLUSION

The diversity of honeybee populations based on their genetic nature is a unique and irreplaceable resource for the creation and reproduction of new subspecies of bees resistant to pests, diseases and changing environmental conditions.

### FUTURE WORK / REFERENCES

Work on studying the diversity of honey bees will continue in the face of climate change. Annual monitoring of the causes of bee colony deaths will be conducted in order to identify the most significant ones, with the aim of developing recommendations for preserving honey bee diversity.

#### REFERENCES:

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### RESULTS & DISCUSSION

Currently, the number of bee colonies in Russia is about 3 million.

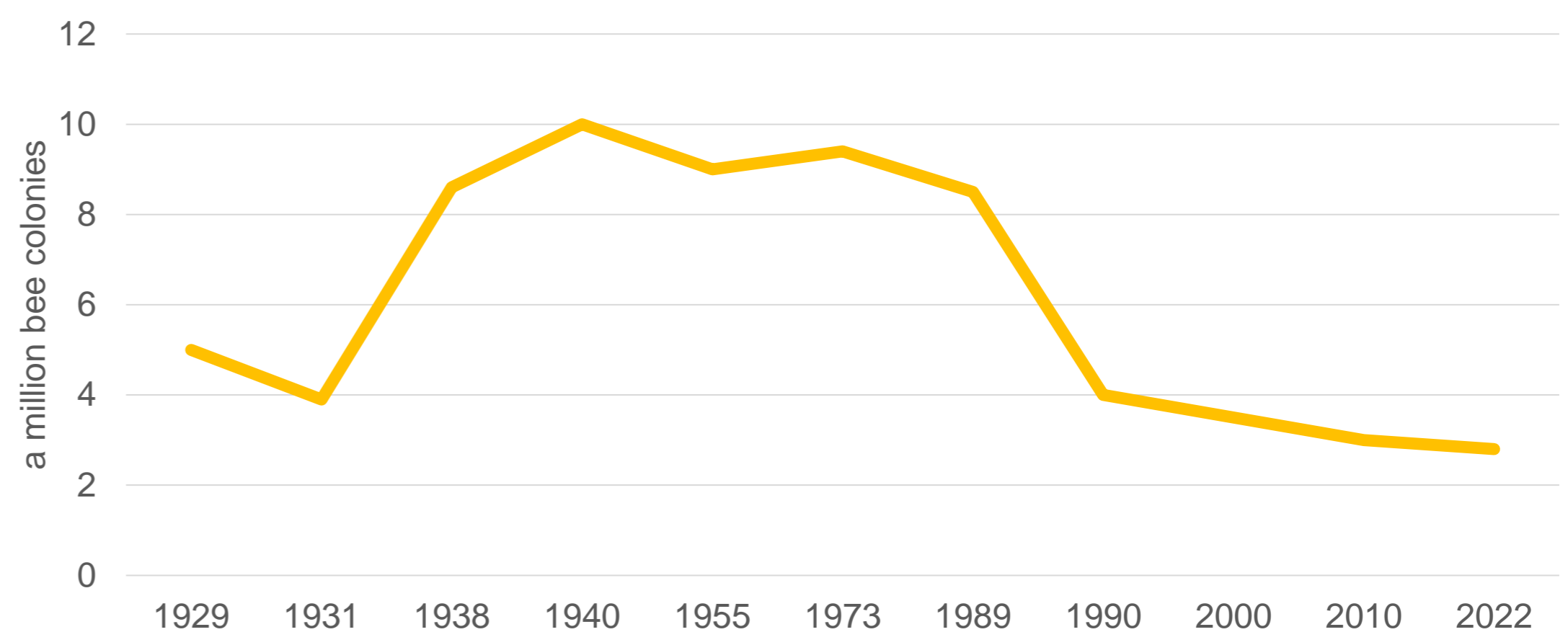


Fig.1. Dynamics of changes in the number of bee colonies in Russia/

Modern apiaries mainly contain non-endemic breeds of honey bees.

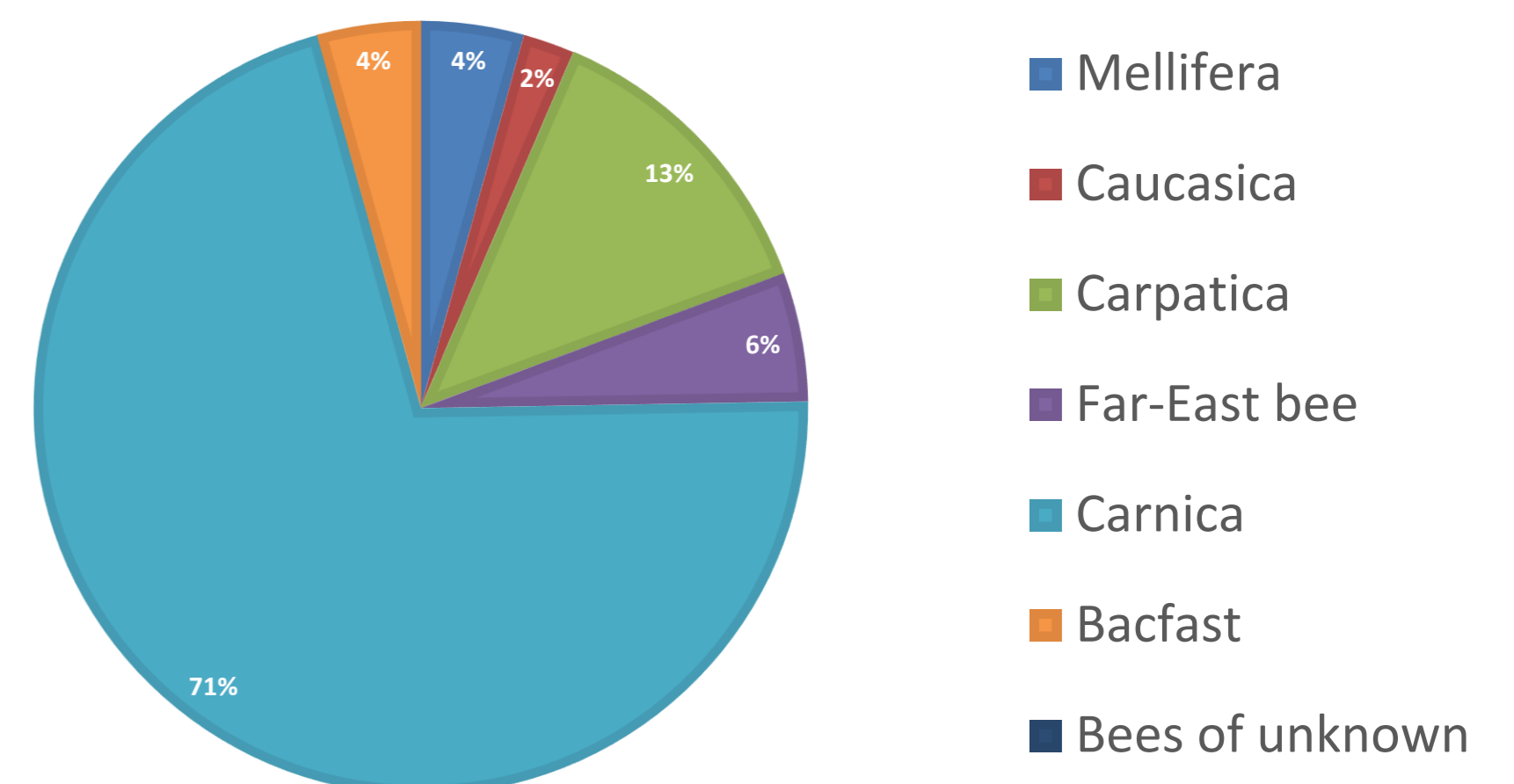


Fig.2. The structure of honey bee breeds bred in apiaries (2022).

With the advent of new breeds, in the last 20 years there has often been a collapse in apiaries. The average percentage of deaths of bee colonies in apiaries in Russia over the past 10 years has been 21%, with the death of bee colonies in 2023 38%.

### Causes of death of bee colonies in the last 10 years:

The use of pesticides.

To 30% is death as a result of a cold long winter.

The appearance of new diseases, for example, *Tropilaelaps* spp.

The import of bee bags with brood, respectively, the import of new populations of Varroa mite with varying degrees of drug resistance.