COLOSS: Honey Bee Winter Colony Loss Survey

2023/2024

Dear Beekeeper,

Your contribution to this annual survey on colony losses would be much appreciated. The survey aims to identify the percentage colony losses being experienced by beekeepers at both a national and regional level and to identify the possible causes for these losses. To facilitate this type of an analysis, it is important that as many beekeepers as possible participate and **all** the questions in the survey are answered. At various points in the questionnaire, there are short statements marked as Information. These are highlighted in Red and aim to explain the logic of the questions that follow.

Please send completed questionnaires to:

Mary F Coffey, COLOSS survey, Backweston Laboratories, Celbridge, Kildare, W23 X3PH

ALL completed surveys **should be returned by 30 June 2024.**

In late May, the questionnaire will be available for completion online using the link https://www.surveymonkey.com/r/coloss2024 This link will be available on the webpages of FIBKA, NIHBS and IBA CLG and will be sent to local secretaries for circulation to all members. It is important that each beekeeper only completes the survey once.

Thank you

The Questionnaire

1. To describe the location of your main apiary or operation, please state
   a) the name of a city/town/village near to your apiary? _____
   b) the Eircode of the apiary (or an Eircode code nearby) _____
   c) the county _____

2. How many apiaries do you have? ☐

3. If you have more than one apiary, are all your apiaries within a distance of 15 km from each other? If you have only **one** apiary, **please answer yes.**

   O Yes O No O Don't know

Information: ***Please consider winter as the period between finishing pre-winter preparations and the start of the new foraging season. A production colony is a colony which is queen right and is strong enough to produce honey.***

4. How many production colonies did you have **before winter 2023-2024** ☐

   and

4a. How many additional colonies did you acquire during the winter period . ☐

Information: ***In the next questions you are asked for numbers of colonies lost during the winter. Please consider a colony as lost if it:***

- ***was still alive post winter, but had queen problems you couldn't solve (drone laying queen or no queen at all)***
- ***died due to natural disaster***
- ***died out (or reduced to a few hundred bees) during winter***

Each colony LOST should be recorded to ONLY one of these three categories.

❺ How many of these (❹) colonies that you lost were alive but had unsolvable queen problems. If none, **please answer 0.**

❻ How many of these (❹) colonies that were lost were due to natural disaster (flooding, storm, fallen tree, cattle/sheep, vandalism, theft, rodents)?

❼ How many of these (❹) colonies died out during the winter period? (This should include colonies with dead bees and empty hives):

❽ How many of the dead colonies (died out group) (❼)

a) … had many dead bees in or in front of the hive?

b) … had no or only a few dead bees in or in front of the empty hive?

c) … had dead workers in cells and no food present in the hive (signs of starvation)?

d) … had dead workers in cells while food was present in the hive?

e) … had none of the above or unknown symptoms?

Note: Each individual dead colony should be categorized into only one of the Groups marked a) to e). The total number of dead colonies in Q7 should be equal to sum of colonies in Q8

❾ How many of the wintered colonies (❹) were weak but were queen right after winter **2023-2024?**

Information: We would like to calculate increases and decreases in the number of colonies, so if you had colonies in spring 2023 and remember how many you had, please answer the following two questions, considering spring as the start of the foraging season:

❿ How many production colonies did you have in **a) spring 2023 (last year)?**
b) spring 2024 (this year)?

Information: Conditions in the colonies, the environment around the apiary, and management:

⓫ How many of the wintered colonies got a new queen in **2023?** Don't know

⓬ To what extent did you observe queen problems in your colonies during the foraging season of **2023** compared to other years?

O More O Normal O Less O Don't know

⓭ Did you migrate any of your colonies at least once for honey production or pollination **in 2023?**

O Yes O No O Don't know

⓮ Have you noticed bees with crippled/deformed wings in your colonies (during the summer season)? (These are signs of the presence of Deformed Wing Virus, which is spread by Varroa mites).

O Not at all O to a limited extent O to a large extent O Don't know

15 Did most of your bee colonies have a significant flow on one or more of the following **sources in 2023?**

a)	Orchards	O Yes	O No	O Don't know
b)	Oil seed rape	O Yes	O No	O Don't know
c)	Maize	O Yes	O No	O Don't know
d)	Sunflower	O Yes	O No	O Don't know
e)	Heather	O Yes	O No	O Don't know
f)	Autumn forage crops (eg Phacelia)	O Yes	O No	O Don't know
g)	Honeydew	O Yes	O No	O Don't know
h)	Honeydew with melecitosis	O Yes	O No	O Don't know

16 Have you monitored your colonies for Varroa during the period **April 2023 - March 2024**?

O Yes O No O Don't know / not applicable

17 Have you treated your colonies against Varroa during the period **April 2023- March 2024?**

O Yes O No O Don't know / not applicable

18 Could you please indicate the months when you monitored your colonies for Varroa AND indicate when you **started** a *Varroa* treatment or management plan during the period **April 2023- March 2024?** **Method / Product**	Month in which each measure started											
	2023									**2024**		
	April	May	June	July	August	September	October	November	December	January	February	March
Monitoring of Varroa infestation level (e.g. counting mite fall)												
Drone brood removal												
Hyperthermia (heat treatment of brood/bees)												
Other biotechnical method (as e.g. trapping comb, complete brood removal, queen confinement)												
Formic acid - short term												
Formic acid - long term (e.g. Formic pro (MAQS))												
Lactic acid												
Oxalic acid - trickling												
Oxalic acid - sublimation (evaporation)												
Oxalic acid mixtures (e.g. Hiveclean/Bienenwohl/Varromed)												
Thymol (e.g. Apiguard, ApilifeVar)												
Tau-fluvalinate (e.g. Apistan)												
Flumethrin (e.g. Bayvarol, Polyvar)												
Amitraz (in strips, e.g. Apivar, Apitraz; TakTik)												
Amitraz (fumigation/aerosol)												
Coumaphos (e.g. Perizin)												
Coumaphos in strips (e.g. Checkmite+)												
Another chemical product												
Another method												

20 If you gave your colonies a supplemental sugar feed (sugar solution or inverted sugar) last year to prepare for winter, how many kg of sugar (dry matter) did you give on average per production colony?

21 Do you keep your bees in an area where many beekeepers are not treating for Varroa, yet their colonies appear to be surviving?

O Yes O No O Don't know

22 Which of the measures below apply to your beekeeping:

a) Screened (mesh) bottom board in Winter	O Yes	O No	O Don't know
b) Insulated hives in Winter (incl. double walled hives)	O Yes	O No	O Don't know
c) Hives made from synthetic materials	O Yes	O No	O Don't know
d) Certified organic beekeeping	O Yes	O No	O Don't know
e) Queens bred from Varroa tolerant/resistant stock	O Yes	O No	O Don't know
f) Small brood cell size (5.1 mm or less)	O Yes	O No	O Don't know
g) Natural comb (without foundation)	O Yes	O No	O Don't know
h) Purchase wax from outside own operation	O Yes	O No	O Don't
i) Non-wax foundation in brood chamber	O Yes	O No	O Don't know

23 Did you observe *Vespa velutina* (Asian hornet) foraging for honey bees in your apiary/apiaries? O Yes O No O Don't know

24 How much in Euros (€) do you estimate your costs to be per colony for Varroa treatment in the period **April 2023 to March 2024**

25 If you monitored your colonies for Varroa during **2023/2024** which method or methods did you use...(tick more than one method if necessary)

O Mite-fall on inserts/bottom boards
O Visual inspection of the colony
O De-capping of brood (worker or drone)
O Inspection of adult bees using sugar shake or washing
O Sent sample to lab

26 What percentage of colony loss, over the past winter would you consider acceptable for your beekeeping operation (0 – 100%)

Mental health of beekeepers?

28 How positively or negatively do each of the following factors affect how you are feeling at the present time, if at all?

	Very positively	Somewhat positively	Neither negatively nor - positively	Somewhat negatively	Very negatively
Honey bee health and biosecurity	O	O	O	O	O
Financial aspects of beekeeping	O	O	O	O	O
Regulations and compliance	O	O	O	O	O
Workload and time management	O	O	O	O	O
Weather and working outdoors	O	O	O	O	O
Other beekeepers and landowners	O	O	O	O	O
Physical aspects of beekeeping	O	O	O	O	O
Technical and financial support for beekeepers	O	O	O	O	O

On behalf of Prof John Breen and I, our sincere thanks for completing this annual survey on winter colony losses, for the information provided, and the time taken to complete it.

April 2024