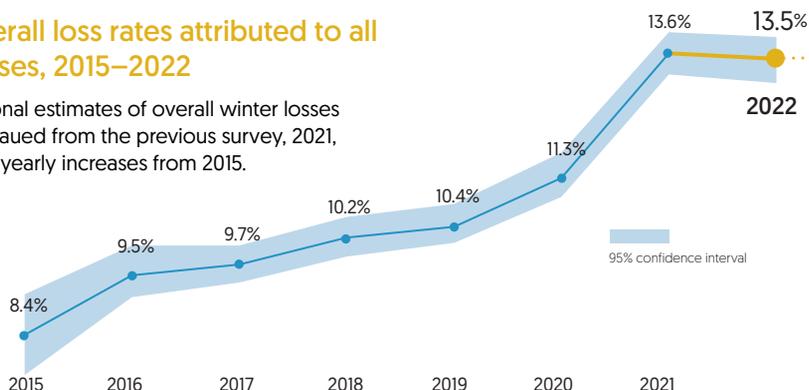


NZ COLONY LOSS SURVEY SUMMARY 2022

This is an on-line survey of beekeepers that aims to quantify winter colony losses. The survey has been conducted annually since 2015. The questionnaire is based on the international COLOSS survey and has been adapted to include topics of specific interest to NZ beekeepers.

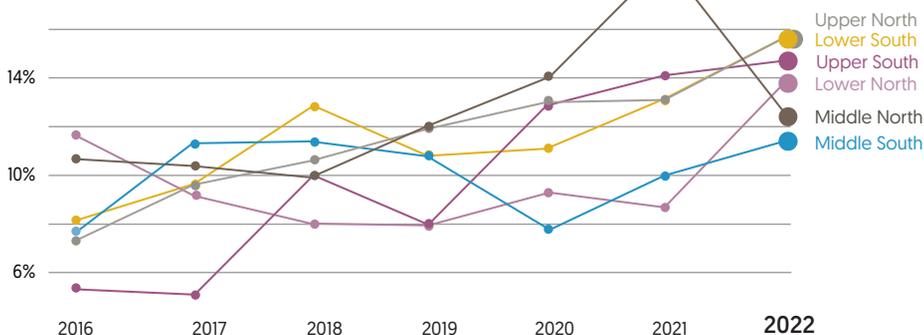
Overall loss rates attributed to all causes, 2015–2022

National estimates of overall winter losses plateaued from the previous survey, 2021, after yearly increases from 2015.

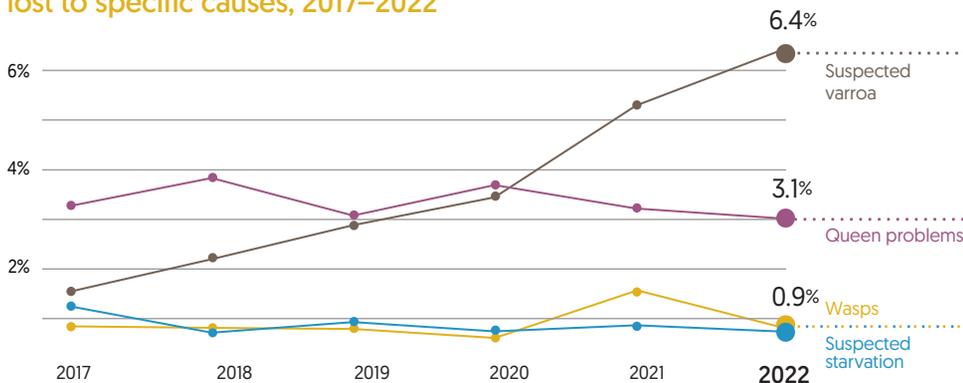


Regional estimated loss rates attributed to all causes, 2016–2022

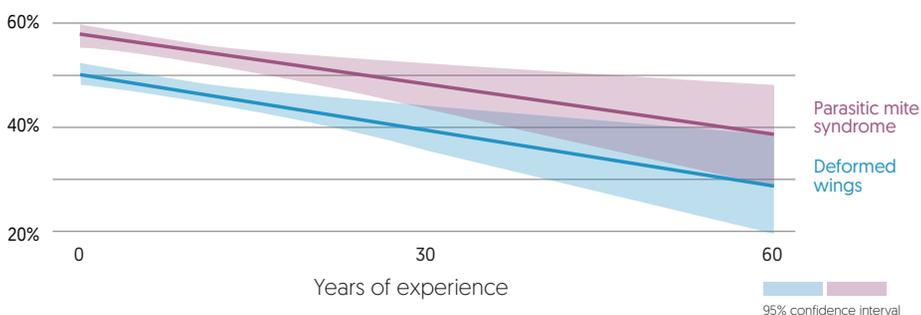
Regional loss rates for 2022 were similar across all regions. Previous surveys show fluctuating regional variation for loss rates.



Estimated percent of all living colonies entering winter lost to specific causes, 2017–2022



Beekeepers NOT observing varroa-related problems

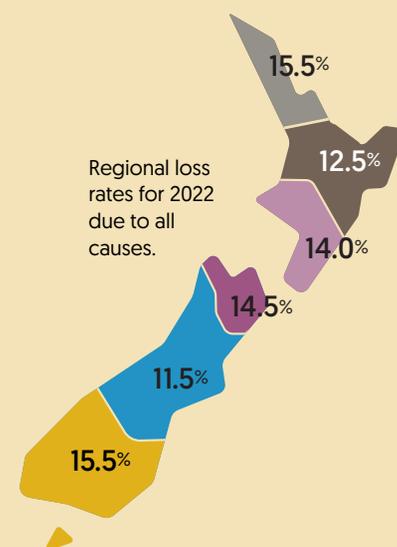


NZ COLONY LOSS SURVEY

13.5%
2022

97,613 colonies lost

This loss rate is statistically unchanged from winter 2021.



Regional loss rates for 2022 due to all causes.

↑20% Suspected varroa continued to increase.

↓6% Queen problems shows downward trend.

Wasps returned to the long-run average.

Suspected starvation remained similar to previous years.

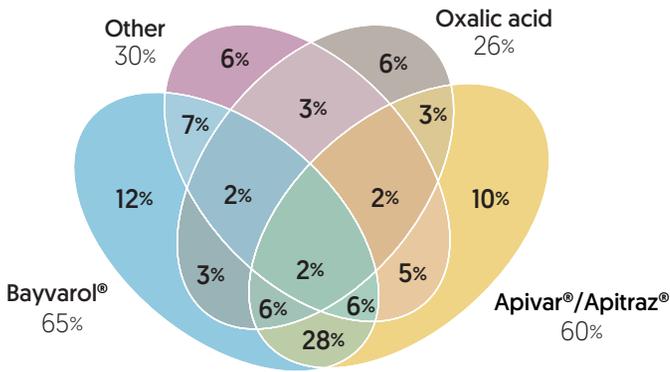
NEW QUESTION IN 2022

More experienced beekeepers are more likely to identify varroa-related problems in their hives.



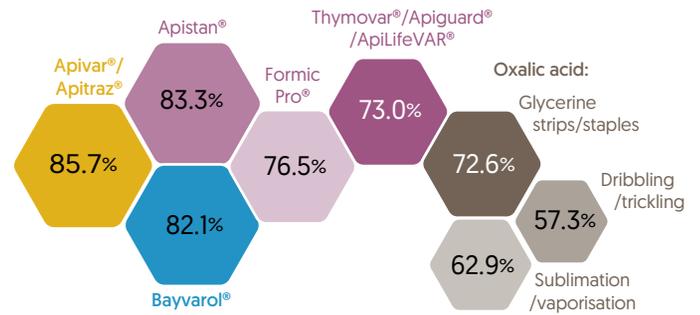
Treatment of varroa

1.5% of beekeepers did not treat varroa. No beekeeper with more than 50 colonies reported in 2022 foregoing varroa treatment, in contrast to 2021.



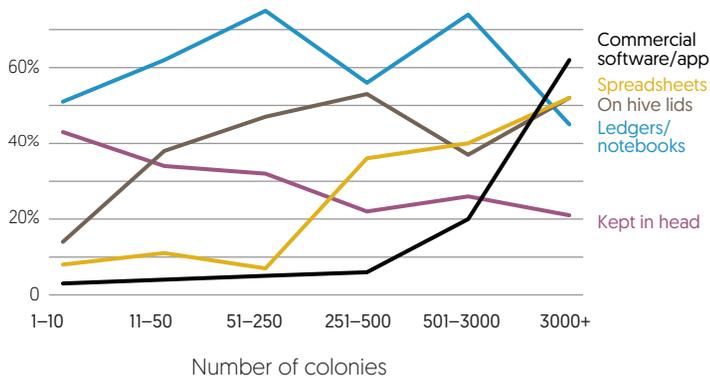
Effectiveness of varroa treatment

Across treatments, approximately 75% of beekeepers described the efficacy as being “mostly successful” or “completely successful”.



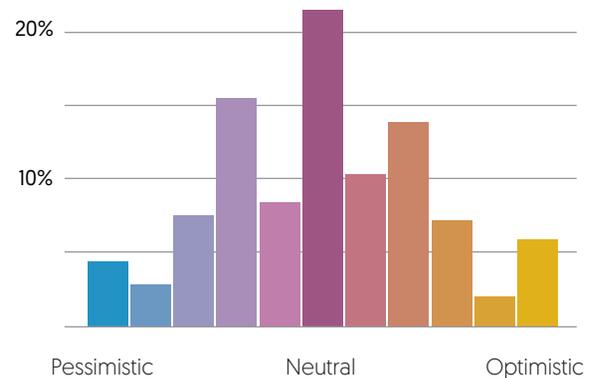
Record keeping of beekeepers

While most beekeepers kept track of colonies formally in ledgers or notebooks, more sophisticated tools such as spreadsheets and specialty software and apps were commonly used by larger operators.



Optimism about the future

Despite a pessimistic economic outlook, beekeepers with more than 50 colonies maintained some degree of optimism about the future of beekeeping in New Zealand.



In a ‘queen cell’

Based on reports from 41% of beekeepers managing 49% of New Zealand’s honeybee colonies, we estimate the overall loss rate during winter 2022 to be 13.5%, or approximately 98,000 colonies. Loss rates increased every year between 2015 (the first year of the survey) and 2021, but plateaued between 2021 and 2022. The overall number of colonies lost fell between 2021 and 2022 due to a smaller national hive stock.

Whereas regional loss rates over winter 2021 exhibited enormous variation, regional loss rates over winter 2022 hovered close to the national average, ranging from 11.5% in the Middle South Island to 15.5% in the Upper North Island and Lower South Island. Loss rates in the Middle North Island were down sharply from 2021 levels, in part due to less intensive wasp activity.

Losses attributed to queen problems, wasps, and suspected starvation were close to their long-term averages whereas losses attributed to suspected varroa continued to increase. Indeed, 6.4% of all living colonies entering winter 2022 are estimated to have been lost to varroa compared to 1.6% in 2017. Losses attributed to suspected varroa were more than double losses attributed to queen problems.

More experienced beekeepers were more likely to observe varroa-related problems such as deformed wings and parasitic mite syndrome.

The vast majority of beekeepers treat varroa using flumethrin (Bayvarol®), amitraz (Apivar® and Apitraz®), and oxalic acid, often in combination. However, 1.5% of beekeepers did not treat for varroa between spring 2021 and winter 2022. In contrast to the 2021 survey, all beekeepers with more than 50 colonies reported treating for varroa. The prevalence of informal record keeping among some small beekeepers may make varroa management more challenging.

Approximately three-quarters of beekeepers described their treatment as “mostly successful” or “completely successful”, suggesting that these treatments maintain their efficacy.

Finally, while many beekeepers are pessimistic about the current economic climate, there remains cautious optimism about the future of beekeeping in New Zealand.

Survey and report commissioned by
Ministry for Primary Industries



View full survey results at:
www.landcareresearch.co.nz/bee-health

