



Thank you for participating in the **2021-2022 Bee Informed Partnership National Colony Loss and Management Survey**

Commercial beekeeper version (51+ colonies on 1 October 2021)

Your participation in this research is confidential. All your answers will be stored in a secure, password protected database application that uses SSL encryption. No personally identifiable information will be disclosed in any publication or presentation resulting from this research. Mention of a beekeeping product/practice in this survey does not constitute an official endorsement or approval by the Bee Informed Partnership. Please only complete this survey if you are 18 years or older.

Please enter your answers electronically, on:

<https://beeinformed.org/take-survey/> (1 April – 30 April 2022)

Completion of this survey is voluntary. If you are not comfortable answering a question, please leave it blank. That said, questions marked by an asterisk (*) are very important! Without answers to them, your data will have limited value.

Loss Survey

For the purpose of this survey, a **'colony'** is defined as any unit of bees housed in a hive. That is, a full-sized colony, a nuc, a newly created split, a newly installed package or swarm, but NOT a mating nuc. It must be headed by a mated queen, or at least contain young brood, a queen cell, or a virgin queen. In other words, it should not be hopelessly queenless.

1* How many colonies did you own on 1 October 2021? (Please select one of the following.)

- 50 or fewer colonies 51 or more colonies

2* In what states and territories were your colonies stationed between 1 April 2021 and 1 April 2022?

(Please choose ALL options relevant to you, including areas visited for pollination services and indoor colony storage. Do not include areas passed through when transporting your colonies.)

- | | | | | | |
|---|------------------------------------|--|---|---|--|
| <input type="checkbox"/> Alabama | <input type="checkbox"/> Georgia | <input type="checkbox"/> Maine | <input type="checkbox"/> New Hampshire | <input type="checkbox"/> Puerto Rico | <input type="checkbox"/> Vermont |
| <input type="checkbox"/> Alaska | <input type="checkbox"/> Guam | <input type="checkbox"/> Maryland | <input type="checkbox"/> New Jersey | <input type="checkbox"/> Rhode Island | <input type="checkbox"/> Virginia |
| <input type="checkbox"/> Arizona | <input type="checkbox"/> Hawaii | <input type="checkbox"/> Massachusetts | <input type="checkbox"/> New Mexico | <input type="checkbox"/> South Carolina | <input type="checkbox"/> Washington |
| <input type="checkbox"/> Arkansas | <input type="checkbox"/> Idaho | <input type="checkbox"/> Michigan | <input type="checkbox"/> New York | <input type="checkbox"/> South Dakota | <input type="checkbox"/> West Virginia |
| <input type="checkbox"/> California | <input type="checkbox"/> Illinois | <input type="checkbox"/> Minnesota | <input type="checkbox"/> North Carolina | <input type="checkbox"/> Tennessee | <input type="checkbox"/> Wisconsin |
| <input type="checkbox"/> Colorado | <input type="checkbox"/> Indiana | <input type="checkbox"/> Mississippi | <input type="checkbox"/> North Dakota | <input type="checkbox"/> Texas | <input type="checkbox"/> Wyoming |
| <input type="checkbox"/> Connecticut | <input type="checkbox"/> Iowa | <input type="checkbox"/> Missouri | <input type="checkbox"/> Ohio | <input type="checkbox"/> Utah | |
| <input type="checkbox"/> District of Columbia | <input type="checkbox"/> Kansas | <input type="checkbox"/> Montana | <input type="checkbox"/> Oklahoma | <input type="checkbox"/> Other, please specify: | |
| <input type="checkbox"/> Delaware | <input type="checkbox"/> Kentucky | <input type="checkbox"/> Nebraska | <input type="checkbox"/> Oregon | | |
| <input type="checkbox"/> Florida | <input type="checkbox"/> Louisiana | <input type="checkbox"/> Nevada | <input type="checkbox"/> Pennsylvania | | |

Time Period Covered by this Survey:

The survey covers the period between the start of summer 2021 and the start of summer 2022.

Starting last year, for commercial beekeepers we consider the ‘Start of Summer’ to be the **morning of the date you made your first split** of the year. We want to know your number before you started splitting.

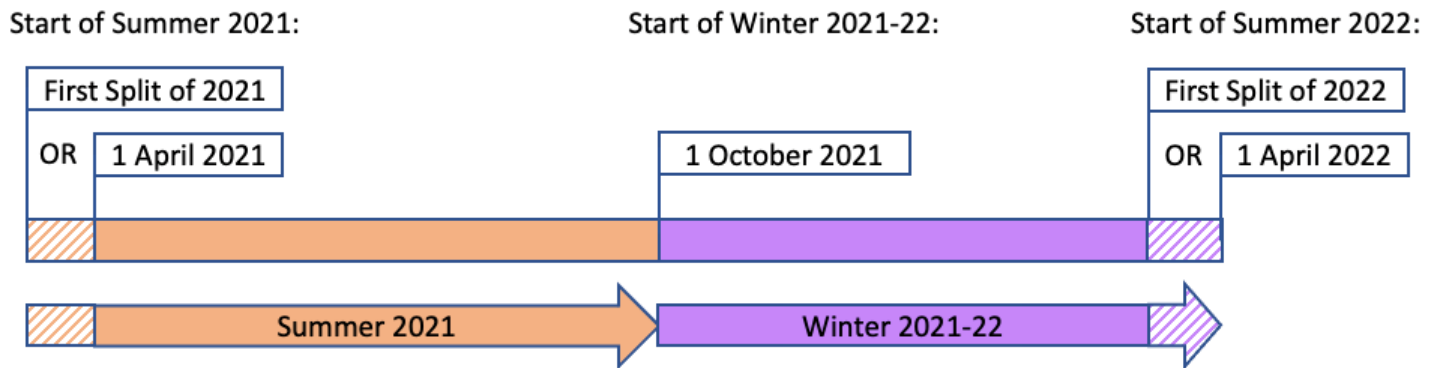
If you did not make any splits before April 1st, then we consider April 1st to be your ‘Start of Summer’.

For example, if you started making your first splits of 2021 on 15 March 2021, your ‘Start of Summer 2021’ was 15 March 2021. BUT, if you started making your first splits of 2021 on 20 April 2021, then your ‘Start of Summer 2021’ was 1 April 2021.

If you started making your first splits of this year on 19 March 2022, your ‘Start of Summer 2022’ was 19 March 2022. If you have not made any splits by 1 April 2022, then we will consider your ‘Start of Summer 2022’ to be 1 April 2022.

Note that 1 October 2021 is always the ‘Start of Winter 2021-22’.

Please refer to these definitions and the timeline below when completing the survey.



Your answers to the next two questions will determine what dates to use as your ‘Start of Summer 2020’ and ‘Start of Summer 2021’ for the rest of the survey.

3* Did you make one or more **split during 2021**?
 No Yes
 (1 April 2021 is your ‘Start of Summer 2021’)
 If Yes, on what date did you start splitting in 2021?
 (If this date is before 1 April 2021, this is your ‘Start of Summer 2021’. Otherwise, 1 April 2021 is your ‘Start of Summer 2021’)

4* Did you make one or more **split during 2022**?
 No Yes
 (1 April 2022 is your ‘Start of Summer 2022’)
 If Yes, on what date did you start splitting in 2022?
 (This date is your ‘Start of Summer 2022’)

5* How many colonies did you own at each time?
 Start of Summer 2021 1 October 2021 Start of Summer 2022

6 How strong was your average colony at each time? Estimate the number of ‘frames of bees’.
 (One ‘frame of bees’ = One deep Langstroth frame fully occupied by bees on both sides).
 Start of Summer 2021 1 October 2021 Start of Summer 2022

7* How many colonies did you **obtain** from outside your operation during each period?
(Please include both those that did AND did not successfully survive in your operation after your initial installation.)

Remember: 'Summer 2021 is defined as the period between your 'Start of Summer 2021' and '1 October 2021'. 'Winter 2021-22' is defined as the period between 1 October 2021 and your 'Start of Summer 2022'.

Summer 2021 Winter 2021-22

8* How much **net increase** in colonies did you make from splitting your own colonies during each period?
(Please include both those that did AND did not successfully survive. Also include packages, nucs, and splits that were eventually sold.)

Examples of **net increase** by splitting:
 1) You might break down an entire colony while making splits. If you break down 1 colony into 3 smaller colonies, this represents a **net increase** of 2 colonies.
 2) You might take extra bees and brood from strong colonies. Two strong colonies results in one new colony AND the two original colonies. This represents a **net increase** of 1 colony.

Summer 2021 Winter 2021-22

9* How many colonies did you **sell or give away** during each period?

Remember: our definition of a colony includes full-sized colonies, as well as newly made splits/nucs and packages.

Summer 2021 Winter 2021-22

10* How much was your **net decrease** in colonies due to intentionally combining your colonies?

Example of **net decrease** by combining: You might combine 2 weak colonies into one. This represents a **net decrease** of 1 colony.

Summer 2021 Winter 2021-22

11* What **percentage of loss** over the last **winter (Winter 2021-22)** would you consider acceptable? Between 0-100%

12 What factors do you think were the most prominent **cause(s) of colony death** in your operation in **Summer 2021?** *(Select up to 3)*

I did not experience summer loss
 Natural disaster (e.g. hurricane, flood)
 Shipping stress (e.g. overheating, truck issues)
 Adverse weather (e.g. drought)
 Nutritional stress (pollen deprivation)
 Equipment failure (e.g. moisture, ventilation)
 Brood diseases (e.g. EFB, AFB)
 Starvation (honey/nectar/sugar water)
 Failure of environmental controls in sheds
 Queen issues
 Non-apicultural pesticides
 Predators (e.g. bears)
 I don't know
 Apicultural treatments (e.g. formic acid, amitraz)
 Scavenger pests (e.g. small hive beetle, wax moth)
 Other, please specify:
 Varroa mites and associated viruses

13 What factors do you think were the most prominent **cause(s) of colony death** in your operation in **Winter 2021-22?** *(Select up to 3)*

I did not experience winter loss
 Natural disaster (e.g. hurricane, flood)
 Shipping stress (e.g. overheating, truck issues)
 Adverse weather (e.g. cold snap)
 Nutritional stress (pollen deprivation)
 Equipment failure (e.g. moisture, ventilation)
 Brood diseases (e.g. EFB, AFB)
 Starvation (honey/nectar/sugar water)
 Failure of environmental controls in sheds
 Queen issues
 Non-apicultural pesticides
 Predators (e.g. bears)
 I don't know
 Apicultural treatments (e.g. formic acid, amitraz)
 Scavenger pests (e.g. small hive beetle, wax moth)
 Other, please specify:
 Varroa mites and associated viruses

14 What was the ZIP code of your **base of operations** during the survey period? 5-digit ZIP codes only
(Please provide only one even if you keep bees in multiple locations.)

15 For each state you kept bees in, please give us a ZIP code that is centrally located in, or most representative of your beekeeping area.
(Include states that your bees were set down in, including for indoor wintering, but not states that you only bought bees from or passed through during transport.)

State	ZIP	
<input type="text"/>	<input type="text"/>	5-digit ZIP codes only
<input type="text"/>	<input type="text"/>	5-digit ZIP codes only
<input type="text"/>	<input type="text"/>	5-digit ZIP codes only
<input type="text"/>	<input type="text"/>	5-digit ZIP codes only

16	What percentage of the colonies you owned during the 2022 almond bloom were used to pollinate almonds in California ?	<input type="text"/>	Between 0-100%
17	What percentage of the colonies you owned on 1 January 2022 were stored indoors on that date?	<input type="text"/>	Between 0-100%
18	If on 1 January 2022 you had colonies in indoor storage, in what state(s) were they stored indoors?	<input type="text"/>	

19* Did you move any of your colonies across state lines between your **Start of Summer 2021** and **Start of Summer 2022**?
(Do not include colonies you obtained from out of state before you installed them.)

No Yes If Yes, what percentage of your operation moved across state lines at least once: Between 0-100%

If Q19 is "NO"

20	How many colonies on average share the same location (apiary)?	<input type="text"/>															
21	At the start of each month, how many colonies did you own in each state/territory?																
	State	1 Jan 2021	1 Feb 2021	1 Mar 2021	1 Apr 2021	1 May 2021	1 Jun 2021	1 July 2021	1 Aug 2021	1 Sept 2021	1 Oct 2021	1 Nov 2021	1 Dec 2021	1 Jan 2022	1 Feb 2022	1 Mar 2022	1 Apr 2022
-																	
-																	
-																	
-																	

If Q19 is "YES": Colony migrations

22							Please list movements of colonies across state lines during the survey period. <i>(List up to 8 moves ; if you have some stationary colonies that never move, please enter a "destination state" without origin or month for those)</i>						
Move #	Origin state	Destination state	Month of move	Number of colonies moved	Reason(s) for move (Select primary reason)		How many colonies did you keep per location/apiary in this state? (Please respond with an average)						
					<input type="radio"/> Splitting <input type="radio"/> Buildup <input type="radio"/> Honey production <input type="radio"/> Queen production	<input type="radio"/> Pollination contracts <input type="radio"/> Outdoor wintering <input type="radio"/> Indoor wintering <input type="radio"/> Other							
1					<input type="radio"/> Splitting <input type="radio"/> Buildup <input type="radio"/> Honey production <input type="radio"/> Queen production	<input type="radio"/> Pollination contracts <input type="radio"/> Outdoor wintering <input type="radio"/> Indoor wintering <input type="radio"/> Other	<input type="text"/> Colonies/Apiary						
2					<input type="radio"/> Splitting <input type="radio"/> Buildup <input type="radio"/> Honey production <input type="radio"/> Queen production	<input type="radio"/> Pollination contracts <input type="radio"/> Outdoor wintering <input type="radio"/> Indoor wintering <input type="radio"/> Other	<input type="text"/> Colonies/Apiary						
3					<input type="radio"/> Splitting <input type="radio"/> Buildup <input type="radio"/> Honey production <input type="radio"/> Queen production	<input type="radio"/> Pollination contracts <input type="radio"/> Outdoor wintering <input type="radio"/> Indoor wintering <input type="radio"/> Other	<input type="text"/> Colonies/Apiary						
4					<input type="radio"/> Splitting <input type="radio"/> Buildup <input type="radio"/> Honey production <input type="radio"/> Queen production	<input type="radio"/> Pollination contracts <input type="radio"/> Outdoor wintering <input type="radio"/> Indoor wintering <input type="radio"/> Other	<input type="text"/> Colonies/Apiary						
5					<input type="radio"/> Splitting <input type="radio"/> Buildup <input type="radio"/> Honey production <input type="radio"/> Queen production	<input type="radio"/> Pollination contracts <input type="radio"/> Outdoor wintering <input type="radio"/> Indoor wintering <input type="radio"/> Other	<input type="text"/> Colonies/Apiary						

6					<input type="radio"/> Splitting <input type="radio"/> Buildup <input type="radio"/> Honey production <input type="radio"/> Queen production	<input type="radio"/> Pollination contracts <input type="radio"/> Outdoor wintering <input type="radio"/> Indoor wintering <input type="radio"/> Other	<input type="text"/> Colonies/Apiary
7					<input type="radio"/> Splitting <input type="radio"/> Buildup <input type="radio"/> Honey production <input type="radio"/> Queen production	<input type="radio"/> Pollination contracts <input type="radio"/> Outdoor wintering <input type="radio"/> Indoor wintering <input type="radio"/> Other	<input type="text"/> Colonies/Apiary
8					<input type="radio"/> Splitting <input type="radio"/> Buildup <input type="radio"/> Honey production <input type="radio"/> Queen production	<input type="radio"/> Pollination contracts <input type="radio"/> Outdoor wintering <input type="radio"/> Indoor wintering <input type="radio"/> Other	<input type="text"/> Colonies/Apiary

23	Please provide your email address <i>This email is requested for administrative purposes and will never be disclosed.</i> <i>The Bee Informed Partnership does not share any email addresses.</i>	
	<input type="text"/>	
24	Would you be willing to be contacted regarding survey results and future surveys?	<input type="radio"/> Yes <input type="radio"/> No
25	Would you like to receive additional updates from the Bee Informed Partnership and learn about its various programs?	<input type="radio"/> Yes <input type="radio"/> No

Congratulations and thank you! You have just completed **Part 1** of the survey. Your information will be used to generate **colony loss** information that is critical to monitor the health of honey bee colonies in the country.

Please keep going! Part 2 focuses on how you managed your colonies last year. This information allows us to understand how your management practices are connected to the health of your colonies.

Core Management Survey

New colonies & queens

Note that **‘providing a new queen’** includes giving a colony a mated queen, a queen cell, and even the opportunity to raise a new queen by making a walk-away split or removing the old queen.

26*	During the survey period, did you start or obtain any new colonies?	<input type="radio"/> No <input type="radio"/> Yes
27	If Yes, how did you start or obtain your new colonies during the survey period? <i>(Select all that apply)</i> <input type="checkbox"/> Splits <input type="checkbox"/> Swarms <input type="checkbox"/> Packages <input type="checkbox"/> Nucs <input type="checkbox"/> Full colonies	
28*	Did you provide any new queens to your colonies during the survey period? <i>(Include queens provided both during splitting and requeening.)</i>	<input type="radio"/> No <input type="radio"/> Yes
29	If Yes, how many of each type of queen did you provide to your colonies during the survey period? Type New mated queens Queen cells Walk-away splits, or killed queen to allow colony to raise emergency queen Other, please specify:	Number <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>

Inputs, pest monitoring, and pest management

30* Which, if any, of the following did you apply to any of your colonies between your **Start of Summer 2021** and **Start of Summer 2022**?

(Select all that apply)

- | | | |
|--|---|--|
| <input type="checkbox"/> None of the following | <input type="checkbox"/> Amitraz-based product (Apivar/other) | <input type="checkbox"/> Fluvalinate-based product (Apistan) |
| <input type="checkbox"/> Fumagillin (Fumadil B) | <input type="checkbox"/> Thymol-based product (ApiLife VAR, ApiGuard) | <input type="checkbox"/> Coumaphos-based product (CheckMite+) |
| <input type="checkbox"/> Terramycin | <input type="checkbox"/> Menthol-based product (Mite-A-Thol) | <input type="checkbox"/> Tylan-based product (Tylosin) |
| <input type="checkbox"/> Hop oil based product (HopGuard) | <input type="checkbox"/> Formic Acid (MiteAway QuickStrips - MAQS) | <input type="checkbox"/> Essential oils |
| <input type="checkbox"/> Mineral oils | <input type="checkbox"/> Oxalic Acid | |
| <input type="checkbox"/> Other, please specify: <input style="width: 600px; height: 20px;" type="text"/> | | |

31* Which, if any, of the following physical or cultural practices did you apply to any of your colonies between your **Start of Summer 2021** and **Start of Summer 2022**? *(Select all that apply)*

Note: the following list includes proven and unproven practices, which may or may not control Varroa mites.

- | | | |
|--|---|---|
| <input type="checkbox"/> None of the following | <input type="checkbox"/> Indoor winter storage | <input type="checkbox"/> Splitting |
| <input type="checkbox"/> Bees bred for resistance to Varroa | <input type="checkbox"/> Splitting that induced a brood break | |
| <input type="checkbox"/> Drone brood removal | ↳ <input type="checkbox"/> Miticide in conjunction with brood break from indoor wintering | ↳ <input type="checkbox"/> Miticide in conjunction with above brood break |
| <input type="checkbox"/> Screened bottom boards | <input type="checkbox"/> Location/strategic migration that induced a brood break | <input type="checkbox"/> Other method of inducing a brood break |
| <input type="checkbox"/> Small-cell foundation | ↳ <input type="checkbox"/> Miticide in conjunction with above brood break | ↳ <input type="checkbox"/> Miticide in conjunction with above brood break |
| <input type="checkbox"/> Powdered sugar | | |
| <input type="checkbox"/> Heat treatments | | |
| <input type="checkbox"/> Other, please specify: <input style="width: 600px; height: 20px;" type="text"/> | | |

32 If Yes, how **often** per month did you initiate each activity? *(e.g. 3x for May)*

During the survey period, **did you initiate a round of...**

	Jan '21	Feb '21	Mar '21	Apr '21	May '21	Jun '21	Jul '21	Aug '21	Sep '21	Oct '21	Nov '21	Dec '21	Jan '22	Feb '22	Mar '22
... chemical treatment against Varroa? <input type="radio"/> No <input type="radio"/> Yes															
... physical or cultural practices against Varroa? <input type="radio"/> No <input type="radio"/> Yes															
... colony inspections? <input type="radio"/> No <input type="radio"/> Yes															
... Varroa mite monitoring? <input type="radio"/> No <input type="radio"/> Yes															
... Nosema monitoring? <input type="radio"/> No <input type="radio"/> Yes															
... supplemental carbohydrate/sugar feed? <input type="radio"/> No <input type="radio"/> Yes															
... supplemental protein feed? (e.g. protein patties) <input type="radio"/> No <input type="radio"/> Yes															

Focused Management Survey

This year's Management Survey focuses on practices related to the **Environment** your colonies experience. This includes questions on nectar and pollen flows, supplemental feeding, honey harvest, pollination events, and pesticide and weather impacts.

We'd like to understand how the environment contributes to your colonies' nutrition, and how forage conditions change across the country through the season.

Forage, feeding, and supplements

33 During which months did the majority of your colonies experience a noticeable **nectar flow**? *(Select all that apply)*
 I don't know

Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	July 2021	Aug 2021	Sept 2021	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

34 During which months did the majority of your colonies experience a noticeable **pollen flow**? *(Select all that apply)*
 I don't know

Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	July 2021	Aug 2021	Sept 2021	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

35* During the survey period, did you feed a **food supplement/substitute or stimulant** to any of your colonies? No Yes

36 If Yes, which of the following did you feed to any of your colonies between your **Start of Summer 2021** and **Start of Summer 2022**?
(Select all that apply)

Carbohydrates/Sugars		Protein	Stimulants
<input type="checkbox"/> Honey (capped frames)	<input type="checkbox"/> High Fructose Corn Syrup (HFCS)	<input type="checkbox"/> Protein supplement (e.g. MegaBee, BeePro, UltraBee)	<input type="checkbox"/> Essential oils in sugar feed (e.g. VitaFeed Green/Gold, Honey-B-Healthy, Hive Alive, ProHealth)
<input type="checkbox"/> Honey (excess extracted)	<input type="checkbox"/> Sugar syrup (sucrose, sugar water, Pro-Sweet, liquid feed)	<input type="checkbox"/> Natural pollen (loose or stored in combs)	<input type="checkbox"/> Probiotics
<input type="checkbox"/> Dry sugar	<input type="checkbox"/> Candy (fondant, winter patties)		
<input type="checkbox"/> Other, please specify:	<input style="width: 600px; height: 20px;" type="text"/>		

Honey harvest

37 Did you harvest any honey during the survey period? No Yes

38 If Yes, of the states your colonies were stationed in during the survey period, in which did you harvest honey?

State	Did you harvest in this state?	From how many colonies did you harvest honey in this state?	How many total pounds of honey were harvested in this state from these colonies?	What were the main nectar source(s)? <i>(Provide up to 3)</i>
-	<input type="radio"/> No <input type="radio"/> Yes			
-	<input type="radio"/> No <input type="radio"/> Yes			
-	<input type="radio"/> No <input type="radio"/> Yes			
-	<input type="radio"/> No <input type="radio"/> Yes			

Pollination of Crops

39	During the survey period, did you use any of your colonies specifically for pollination of agricultural crops ? <i>(i.e. crops that are commercially grown on field scales; do not include home gardens)</i>				<input type="radio"/> No	<input type="radio"/> Yes
40	If Yes, how many colonies did you use to pollinate each crop during the survey period?				Did you provide carbohydrate/sugar feed during pollination?	Did you provide protein feed during pollination?
	Crop	# of colonies used	Did the bee population of the colonies increase, decrease, or stay the same during the pollination event?			
-			<input type="radio"/> Increased	<input type="radio"/> Decreased	<input type="radio"/> Stayed the same	<input type="radio"/> No <input type="radio"/> Yes
-			<input type="radio"/> Increased	<input type="radio"/> Decreased	<input type="radio"/> Stayed the same	<input type="radio"/> No <input type="radio"/> Yes
-			<input type="radio"/> Increased	<input type="radio"/> Decreased	<input type="radio"/> Stayed the same	<input type="radio"/> No <input type="radio"/> Yes
-			<input type="radio"/> Increased	<input type="radio"/> Decreased	<input type="radio"/> Stayed the same	<input type="radio"/> No <input type="radio"/> Yes
41	Did you derive an income by renting your colonies for pollination?				<input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> Prefer not to say

Pesticide impacts

42	During the survey period, did you notice damage to your colonies that you think was caused by pesticides (excluding apicultural treatments)?														<input type="radio"/> No	<input type="radio"/> Yes					
	If Yes, please provide some details below. <i>(If there were several such events, please give information on the most impactful one.)</i>																				
43	In which state did the event occur?																				
44	Which month(s) did the event occur? <i>(Select all that apply)</i>																				
	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	July 2021	Aug 2021	Sept 2021	Oct 2021	Nov 2021	Dec 2021	Jan 2022	Feb 2022	Mar 2022						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
45	How would you primarily characterize the location of the affected apiary/apiaries?																				
	<input type="radio"/> Urban		<input type="radio"/> Sub-urban			<input type="radio"/> Agricultural				<input type="radio"/> Natural											
46	If in an agricultural/natural location, which crops were nearby?															<input type="radio"/> I don't know					
47	What effects on the colonies did you observe? <i>(Select all that apply)</i>																				
	<input type="checkbox"/> Poor buildup				<input type="checkbox"/> Population depletion				<input type="checkbox"/> Trembling bees				<input type="checkbox"/> Dead bees around the hive(s)			<input type="checkbox"/> Dead bees in hive(s)			<input type="checkbox"/> Dead or sick brood		
48	How many colonies were affected?																				
49	What percentage of the affected colonies died?																				
	<input type="radio"/> None			<input type="radio"/> Less than 25%			<input type="radio"/> 25-50%			<input type="radio"/> 50-75%			<input type="radio"/> 75-100%								
50	Did you report this to any government agency or official reporting system?														<input type="radio"/> No	<input type="radio"/> Yes					
51	If No, describe why you did not report it																				

Unusual and extreme weather impacts

The following questions are about unusual and extreme weather events you may have experienced in your region and how these events impacted your beekeeping.

52 **Drought and Fire**

Did you experience drought or unusual dry weather? No Yes

Did fire accompany the drought? No Yes

Please describe the impact of drought and fire on your beekeeping. *(Select all that apply)*

<input type="checkbox"/> Colonies lost or killed	<input type="checkbox"/> No noticeable impact
<input type="checkbox"/> Decreased bee population or brood production	<input type="checkbox"/> Increased bee population or brood production
<input type="checkbox"/> Decreased honey crop	<input type="checkbox"/> Increased honey crop
<input type="checkbox"/> Required more supplemental feeding than usual	<input type="checkbox"/> Required less supplemental feeding than usual
<input type="checkbox"/> Decreased or delayed queen production or mating	<input type="checkbox"/> Improved queen production or mating
<input type="checkbox"/> Travel or logistic issues (including additional movement of colonies)	
<input type="checkbox"/> Other, please specify: <input type="text"/>	

53 **Rain and Flooding**

Did you experience unusual rain? No Yes

Did flooding accompany the unusual rain? No Yes

Please describe the impact of unusual rain and flooding on your beekeeping. *(Select all that apply)*

<input type="checkbox"/> Colonies lost or killed	<input type="checkbox"/> No noticeable impact
<input type="checkbox"/> Decreased bee population or brood production	<input type="checkbox"/> Increased bee population or brood production
<input type="checkbox"/> Decreased honey crop	<input type="checkbox"/> Increased honey crop
<input type="checkbox"/> Required more supplemental feeding than usual	<input type="checkbox"/> Required less supplemental feeding than usual
<input type="checkbox"/> Decreased or delayed queen production or mating	<input type="checkbox"/> Improved queen production or mating
<input type="checkbox"/> Travel or logistic issues (including additional movement of colonies)	
<input type="checkbox"/> Other, please specify: <input type="text"/>	

54 **Unusual or extreme temperatures**

Did you experience unusual or extreme cold weather? No Yes

If Yes, in which season did this occur? Spring Summer Fall Winter

Did you experience unusual or extreme hot weather? No Yes

If Yes, in which season did this occur? Spring Summer Fall Winter

Please describe the impact of unusual temperatures on your beekeeping. *(Select all that apply)*

<input type="checkbox"/> Colonies lost or killed	<input type="checkbox"/> No noticeable impact
<input type="checkbox"/> Decreased bee population or brood production	<input type="checkbox"/> Increased bee population or brood production
<input type="checkbox"/> Decreased honey crop	<input type="checkbox"/> Increased honey crop
<input type="checkbox"/> Required more supplemental feeding than usual	<input type="checkbox"/> Required less supplemental feeding than usual
<input type="checkbox"/> Decreased or delayed queen production or mating	<input type="checkbox"/> Improved queen production or mating
<input type="checkbox"/> Travel or logistic issues (including additional movement of colonies)	
<input type="checkbox"/> Other, please specify: <input type="text"/>	

55 **High winds and storms**

Did you experience high winds or severe storms? No Yes

Please describe the impact of high winds or severe storms on your beekeeping. *(Select all that apply)*

<input type="checkbox"/> Colonies lost or killed	<input type="checkbox"/> No noticeable impact
<input type="checkbox"/> Decreased bee population or brood production	<input type="checkbox"/> Increased bee population or brood production
<input type="checkbox"/> Decreased honey crop	<input type="checkbox"/> Increased honey crop
<input type="checkbox"/> Required more supplemental feeding than usual	<input type="checkbox"/> Required less supplemental feeding than usual
<input type="checkbox"/> Decreased or delayed queen production or mating	<input type="checkbox"/> Improved queen production or mating
<input type="checkbox"/> Travel or logistic issues (including additional movement of colonies)	
<input type="checkbox"/> Other, please specify: <input type="text"/>	

Demographic Survey

A little bit about you

56	Why did you keep bees? <i>(Select all that apply)</i>	<input type="checkbox"/> For pollination contracts <input type="checkbox"/> To produce queens or queen cells for sale <input type="checkbox"/> To produce packages for sale <input type="checkbox"/> To produce nucs for sale <input type="checkbox"/> Other, please specify: <input type="text"/>	<input type="checkbox"/> To produce honey/wax/pollen for sale <input type="checkbox"/> To produce honey/wax/pollen/queens for personal use <input type="checkbox"/> For enjoyment/hobby <input type="checkbox"/> For teaching/education
57	What gender do you identify as?	<input type="text"/>	
58	How do you characterize your ethnicity ? <i>(Select all that apply)</i>	<input type="checkbox"/> American Indian or Alaska Native (e.g. Blackfoot Tribe, Navajo Nation, Nome Eskimo Community, etc.) <input type="checkbox"/> Black or African American (e.g. African American, Nigerian, Jamaican, etc.) <input type="checkbox"/> Middle Eastern or North African (e.g. Iraqi, Egyptian, Moroccan, etc.) <input type="checkbox"/> White (e.g. English, German, French, etc.)	<input type="checkbox"/> Asian (e.g. Asian Indian, Chinese, Thai, etc.) <input type="checkbox"/> Hispanic, Latino, or Spanish origin (e.g. American Mexican, Mexican, Colombian, etc.) <input type="checkbox"/> Native Hawaiian or Other Pacific Islander (e.g. Native Hawaii, Samoan, Maori, etc.) <input type="checkbox"/> I prefer to not say
59	To which age bracket do you belong? <i>(Select one category)</i>	<input type="radio"/> 18-24 years old <input type="radio"/> 25-34 years old	<input type="radio"/> 35-44 years old <input type="radio"/> 45-54 years old <input type="radio"/> 55-64 years old <input type="radio"/> 65-74 years old <input type="radio"/> 75-84 years old <input type="radio"/> 85 years or older
60	Approximately how many years have you been keeping bees?	<input type="text"/>	(in years)
61	On average how many years have your staff been keeping bees? <i>(if applicable)</i>	<input type="text"/>	(in years/person)
62	During Summer 2021 , on average how many full-time beekeepers worked taking care of your bees? <i>(Count two half-time beekeepers as the equivalent of one full-time beekeeper.)</i>	<input type="text"/>	
63	What are your current main sources of information to improve your beekeeping? <i>(Select up to 3)</i>	<input type="checkbox"/> Other beekeepers that you know personally (e.g. mentor, friends, family, neighbors...) <input type="checkbox"/> Other beekeepers that you DO NOT know personally (e.g. contributors to magazines, blogs, YouTube videos, social media...) <input type="checkbox"/> Beekeeping club / association (local or state) <input type="checkbox"/> Beekeeping organization (regional, national, international; e.g. WAS, HAS, EAS, ABF, AHPA, Apimondia) <input type="checkbox"/> Suppliers (of beekeeping equipment) <input type="checkbox"/> Other, please specify: <input type="text"/>	<input type="checkbox"/> Apiary inspector (or any state official) <input type="checkbox"/> University Extension / Outreach personnel <input type="checkbox"/> Scientists and researchers (e.g. university, USDA) <input type="checkbox"/> Non-profit organization (e.g. Bee Informed Partnership, Honey Bee Health Coalition, Project Apis m.)
64	What do you think are the most trustworthy sources of information to improve your beekeeping? <i>(Select up to 3)</i>	<input type="checkbox"/> Other beekeepers that you know personally (e.g. mentor, friends, family, neighbors...) <input type="checkbox"/> Other beekeepers that you DO NOT know personally (e.g. contributors to magazines, blogs, YouTube videos, social media...) <input type="checkbox"/> Beekeeping club / association (local or state) <input type="checkbox"/> Beekeeping organization (regional, national, international; e.g. WAS, HAS, EAS, ABF, AHPA, Apimondia) <input type="checkbox"/> Suppliers (of beekeeping equipment) <input type="checkbox"/> Other, please specify: <input type="text"/>	<input type="checkbox"/> Apiary inspector (or any state official) <input type="checkbox"/> University Extension / Outreach personnel <input type="checkbox"/> Scientists and researchers (e.g. university, USDA) <input type="checkbox"/> Non-profit organization (e.g. Bee Informed Partnership, Honey Bee Health Coalition, Project Apis m.)
65	In what formats do you currently get most of your information? <i>(Select up to 3)</i>	<input type="checkbox"/> Informal discussions with other beekeepers outside of any group event <input type="checkbox"/> Informal discussions with other beekeepers at meeting/conventions (local, state, regional, national, international) <input type="checkbox"/> Lectures (in-person) <input type="checkbox"/> Lectures (online) <input type="checkbox"/> Hands-on demonstrations (in-person) <input type="checkbox"/> Hands-on demonstrations (online) <input type="checkbox"/> Podcasts <input type="checkbox"/> Other, please specify: <input type="text"/>	<input type="checkbox"/> Books <input type="checkbox"/> Bee journals or magazines <input type="checkbox"/> University Extension / Outreach publications <input type="checkbox"/> Scientific publications <input type="checkbox"/> Online blogs, newsletters, and websites <input type="checkbox"/> Online forums and social media

66	Did you take part in any of the following monitoring efforts ?	<i>Entering your participant code(s) lets us link your responses to this survey with your bee health measures.</i>	
	APHIS National Honey Bee Disease Survey	<input type="radio"/> I don't know	<input type="radio"/> No
	Bee Informed Tech Transfer Teams	<input type="radio"/> I don't know	<input type="radio"/> No
	Bee Informed Sentinel Apiary Program	<input type="radio"/> I don't know	<input type="radio"/> No
		<input type="radio"/> Yes	NHBDS sampling code
		<input type="radio"/> Yes	BIP Tech Team participant code
		<input type="radio"/> Yes	Sentinel Apiary participant code
67	Is this the first year you are participating in our survey?	<input type="radio"/> Yes	<input type="radio"/> No
68	Where did you hear about this survey? <i>(Select all that apply)</i>		
	<input type="checkbox"/> Organization newsletter	<input type="checkbox"/> Bee meeting	<input type="checkbox"/> Friend or neighbor
	<input type="checkbox"/> BIP Website	<input type="checkbox"/> Email from BIP	<input type="checkbox"/> State apiarist
	<input type="checkbox"/> Other, please specify:	<input type="checkbox"/> ABJ or Bee Culture	<input type="checkbox"/> Equipment suppliers
69	Any comments? We would love to hear about what you like about our survey, but also how we can improve it.		

Thank You!

We appreciate your time in answering our Colony Loss and Management Survey!

The Bee Informed Partnership is a non-profit organization that works to improve honey bee health.

By answering these questions on colony loss and management, you are helping us describe a realistic picture of the losses in the US and better understand factors that contribute to colony losses, so that we can work together to reduce losses.

We rely on word of mouth to reach as many beekeepers as possible. Please share the survey announcement far and wide with your beekeeping friends and local clubs!

Please visit beeinformed.org for insights on how the results of this survey can improve your colony management decision making!

