



PAPER EDITION - Pacific North West Annual Loss Survey 2021

Thank you for your participation with the 12th annual Pacific Northwest Honey Bee Loss Survey brought to YOU by Dr. Dewey Caron and Jenai Fitzpatrick.

We understand that there are other regional and national surveys out there. The Pacific North West is a unique area on the forefront of sustainable apiculture and as such it is important for the local beekeepers to know what is happening specifically in their area across Oregon and Washington. While city wide maps may be created with your data, there is no intent to publish maps or any personal data where an individual's beekeeping practices can be specifically located.

A little bit about you

(A) Membership / affiliations _____

(B) How did you learn beekeeping and what would you suggest to somebody interested in becoming one?

Potential answers could be A)Bee mentor, B)Bee club meetings including Q&A, C) Books, journals, and magazines, D) Online reading & videos, or E) any other input you have. _____

(C) How many years have you been beekeeping? # How many **active** colonies do you currently own? #

Survival based on different hive types (D)

Summing all apiaries together but looking only at HIVE TYPE, please indicate how many of each hive type you came into last fall with. Also indicate how many of those hives survived through to April of this year. (fill in # blanks)

I had # 8 frame & # 10 frame Langstroth hives in the fall of 2020 and # 8 fr. & # 10 fr. survived.

I had # 5 frame nucs in the fall of 2020 and # of those survived to March/April 2021.

I had # top bar hives & # Warre hives in fall of 2020 and # top bar & # Warre survived.

I had # other hive types list type and # of those survived to March/April 2021.

Survival in different apiary locations (E) As part of the study we are mapping hives to look for correlation between bee health, land use, human density and management practices. Although locational data for each of your apiaries is not required, it will make this study more robust. Please only enter the address or nearest intersection if comfortable.

Apiary Address or Nearest Intersection	City/County	State	# of hives 10/2020	# of hives 4/2021

Migrating hives (F)

If your hives were moved please share distance and reason. For example "30 mi, conflict w/ neighbor" OR "600mi almonds"

Colony death this year (H)

In your opinion, what factors were the main cause, or causes, of colony death in your operation between October 2020 and March/April 2021? (circle all that apply)

N/A (no death) – I don't know - CCD (no adult bodies in dead hive) - Nosema disease – Pesticides - Poor wintering conditions - Small Hive Beetles – Starvation - Queen failure - Varroa mites - Weak in the fall - Yellow jackets - Other _____

Survival based on origination (G)

Summing all apiaries together but looking only at HIVE ORIGINATION (*where the colony came from*), please indicate how many of each hive origination's you had in fall and indicate how many of those hives survived through to April of this year. (*fill in the # blanks*)

In 2020, I began with # hives that had overwintered from 2019 into 2020 and # survived to April 2021.

In 2020, I purchased # packages and # survived to March/April 2021.

In 2020, I purchased # nucs and # survived to March/April 2021.

In 2020, I caught # swarms and # survived to March/April 2021.

In 2020, I made # splits/divides and # survived to March/April 2021.

In 2020, I did # feral hive transfers/cut outs and # survived to March/April 2021.

In 2020, I did # other _____ list other _____ and # survived to March/April 2021.



Feeding & general hive practices (Summing all apiaries together)

(Ia) During the last bee season (April 1st 2020 to March 31st 2021) I did the following FEEDINGS: (*circle all that apply*)

Frames of honey - liquid honey - Frames of pollen - Pollen patties - dry pollen - Sugar syrup - Corn syrup - Drivert sugar
Dry sugar - Fondant sugar - Hard sugar (candy) - none of above - Other (list) _____

(Ib) During the last bee season, I did the following general WINTERING PRACTICES: (*circle all that apply*)

Equalized hive strength - Rain shelter to entire hive or entrance - Upper entrance access - Ventilation box, quilt box or Vivaldi board
Insulated top - Wrapped the hives (insulated) - Wind/weather protection - None of the above - Other (list) _____

(Ic) During the last bee season, I did the following general SANITATION PRACTICES: (*circle all that apply*)

Alternative hive (non movable comb IE top bar, Warre) - Minimal hive intervention/inspection - Provided hives with distinctive colors/other hive ID measures - Generally avoided moving frames from one hive to another - Cleaned hive tool/frequently washed gloves - Reduce drifting by spreading out colonies in apiary/did other measures - None of these - Other (list) _____

(Id) During the last bee season I used a screened bottom board on (*circle one*) all - some - none of my hives and during the winter & I covered or blocked the screen bottom (*circle one*) never - sometimes - always

Mite monitoring/sampling & management

(Ja) During the last bee season I monitored (*circle one*) all - some - none of my hives for mites.

(Jb) Which mite monitoring method(s) did you use? (*circle all that apply & circle months used*)

1. Mite Drop (sticky boards or other collection tray below hive) JAN - FEB - MAR - APR - MAY - JUN - JUL - AUG - SEP - OCT - NOV - DEC
2. Alcohol Wash (shake/roll separating to count) JAN - FEB - MAR - APR - MAY - JUN - JUL - AUG - SEP - OCT - NOV - DEC
3. Powdered Sugar (shake/roll separating to count) JAN - FEB - MAR - APR - MAY - JUN - JUL - AUG - SEP - OCT - NOV - DEC
4. Visual inspection of drone brood JAN - FEB - MAR - APR - MAY - JUN - JUL - AUG - SEP - OCT - NOV - DEC
5. Visual inspection of adult bees JAN - FEB - MAR - APR - MAY - JUN - JUL - AUG - SEP - OCT - NOV - DEC
6. Other _____

(K1a) Did you sample and not treat? (*circle one*) Yes - No

(K1b) Did you sample and and treat? (*circle all that apply*) Pre-treatment - Post-treatment - Both

Medication and treatments (*circle all that apply*)

(K2) During the last bee season, I did the following non-chemical mite control practices:

Minimal hive inspection/intervention - Requeen with hygienic queens - Brood cycle interruption - Drone brood removal -
Screen bottom board - Provided hives with distinctive colors - Reduce drifting by spreading out colonies in apiary/other measures -
Small cell/Natural comb - Powder sugaring - None of these - Other (list) _____

(L) Which, if any, of the following **mite control** treatment products did you apply to your colonies during the last bee season (April 1st 2020 to March 31st 2021) ?

None - Apivar - ApiGuard - ApiLife Var - Coumaphos (*CheckMite+*) - Fluvalinate (*including Apistan*) - Formic Acid (*MiteAway QuickStrips*) - HopGuard II - Oxalic Acid (Vaporization) - Oxalic Acid (drizzle) - Powdered sugar - Mineral oil MiteATHol (*menthol tracheal mite*) - Other herbal treatments - Other (list) _____

If you used Apivar what months did you use it?

JAN - FEB - MAR - APR - MAY - JUN - JUL - AUG - SEP - OCT - NOV - DEC

If you used an oil (*ApiGuard/ApiLife-Var*) what months did you use it? JAN - FEB - MAR - APR - MAY - JUN - JUL - AUG - SEP - OCT - NOV - DEC

If you used an acid (*MAQS, Oxalic, HopGuard*) when did you use it? JAN - FEB - MAR - APR - MAY - JUN - JUL - AUG - SEP - OCT - NOV - DEC

If you used another chemical list other what months did you use it? JAN - FEB - MAR - APR - MAY - JUN - JUL - AUG - SEP - OCT - NOV - DEC

(M) Which, if any, of the following **bacterial brood disease control** products did you apply to your colonies during the last bee season? Terramycin - Tylosin (*Tylan*) - None - Other _____

(N) Which, if any, of the following **nosema control** products did you apply to your colonies during the last bee season? Fumagilin (*Fumadil B*) - Nosevet - None - Other _____

Queens

(Pa) What percentage of colonies lost due to queen problems? % **(Pb)** Marked queens? Yes - No

(Pc) Did you, or did your hive, requeen in any form during the last bee season? No - Not that I'm aware of - Yes

(Q) How? (*circle all that apply*) Introduced mated queen - Virgin queen introduction - Queen cells - Supercedure occurred - Split hive, allowed colony create new queen - Colony swarmed - other _____

(R) Do you extract any products from the hive? wax - pollen - propolis - royal jelly - venom - honey _____ lbs

Closing thoughts

Do you have any questions or concerns about this survey or wish to share with us any additional information on your overwinter successes/losses?



Options for successfully submitting your hive data! Survey responses will be collected March 15th to May 1st!

1-Please complete this survey at meeting and hand in at end of evening

2-Preferably you can complete an electronic survey located online at www.pnwhoneybeesurvey.com/survey

(It will take about 10-15 minutes & you submit at the end by hitting submit button)

3- Scan and email to info@pnwhoneybeesurvey.com

4-Take this paper home, confirm your numbers, complete the survey and then return (before end of April) via US mail to **Dr. Dewey M. Caron - Dept. of Horticulture, OSU, ALS 4017 - Corvallis OR 97331**

Information obtained from this survey will be available as quickly as possible

Results of this survey will be made available following summation & analysis and the will be presented at participating beekeeper organizations, newsletters, and posted in full at www.pnwhoneybeesurvey.com.

If you have any questions or concerns about this survey contact us at info@pnwhoneybeesurvey.com If we have questions how may we get in touch? Phone _____ email _____