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Report Date: 8/7/20

QUEEN QUALITY REPORT

Date Processed: 8/6/20

Client: TD

Num. of Queens: 16

Num. of Groups: 4

Queen morphometrics:

Date Received: 8/6/20

Α	Weight (mg)	Head Width (mm)	Thorax Width (mm)
Average	215.9 ± 4	3.78 ± 0.02	4.9 ± 0.04
Max	236.8	3.99	5.17
Min	189.8	3.64	4.47
%Global	71.1%	61.4%	69.8%

Insemination quality:

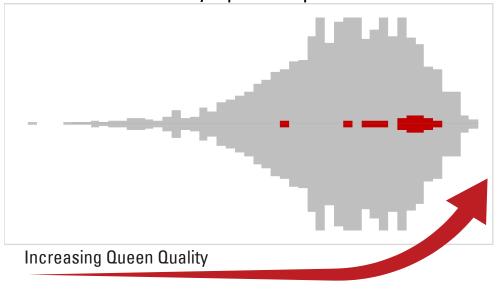
А	Total Sperm (x10^6)	Sperm Viability	Spermatheca % Filled
Average	6.9 ± 0.5	$88.4 \pm 0.8\%$	65.4 ± 5%
Max	10.24	94.2	96.7
Min	3.57	79.2	30.7
%Global	70.7%	63.8%	66.8%



Comments:

Large queens are an indication of strong and well-fed cell builders. These queens appear to have been raised in very good cell builders The total number of stored sperm is very high. The sperm stored in the spermathecae of these queens is of high viability, meaning that a sufficiently high percentage of the sperm was still alive at the time of processing

How do your queens stack up?



Key:

Your Queens Global Queens

This histogram shows the overall scores for all the queens in our database with your queens in red for reference. Placement and spread are important indicators of quality and



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Group Means:

Group	Weight (mg)	Head Width (mm)	Thorax Width (mm)	Total Sperm (x10^6)	Sperm Viability %	Spermatheca % Filled	Overall Score	Morpho Grade	Insemination Grade	Overall Grade
D	229.4 ± 2.4	3.82 ± 0.03	4.97 ± 0.04	7.13 ± 0.69	88.6 ± 0.6 %	64.8 ± 6.7 %	84.0%	A+	Α	Α
В	218.5 ± 7	3.87 ± 0.05	5.01 ± 0.07	8.82 ± 0.5	89.9 ± 0.3 %	83.3 ± 4.7 %	86.1%	Α	Α	Α
С	199.9 ± 7.1	3.71 ± 0.02	4.87 ± 0.09	5.95 ± 0.46	88.5 ± 1.4 %	52.4 ± 0.2 %	78.8%	A-	Α	Α
Α	204.7 ± 5.7	3.72 ± 0.02	4.75 ± 0.06	5.85 ± 0.92	87.3 ± 2.2 %	60.8 ± 10.6 %	76.9%	A-	A-	A-

Key and Instructions for Interpretation

Average The average score for the set of queens measured in the current group

Maximum The maximum score for the set of queens measured in the current group

Minimum The minimum score for the set of queens measured in the current group

% GLOBAL The percentile of the average score within the entire population of all queens measured

 $\textbf{Group Means} \ \frac{\text{If you've included information about batch, yard, or other grouped characteristics, the queens for that group appear in agregate here } \\$

Individual Means These are the raw values for each queen in the whole analyses

		Global Avg. +/- Std Dev		
Morphological Measu				
Weight (mg)	Wet weight of adult queen, assumed to be mated. Expected greater weight if <i>actively</i> laying.	202.1 ± 24.8		
Thorax width (mm)	The distance between the two widest points across the thorax.	4.8 ± 0.3		
Head width (mm)	Maximum width of the head.	3.7 ± 0.2		
Insemination Success	s and Mating Number			
% Viability	The percentage of the sperm stored in the queens' spermathecae that	83.5 ± 14%		
Sperm count (x10°)	expected to mave /J mm.	5.33 ± 2.87		
% filled	The proportion of the theoretical maximum number of sperm that can fit in the spermatheca.	52.9 ± 29%		

Thank you for working with the Honey Bee Queen & Disease Clinic, part of the Apiculture program at NC State!

If you have any questions, please don't hesitate to contact us.

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Individual Queens:

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#	σc	Queen	Group	Weight (mg)	Head Width (mm)	Thorax Width (mm)	Total Sperm (x10^6)	% Sperm Viability	% Filled	Overall Score
1	QC 1761	1	Α	197.7	3.68	4.81	7.38	85.8%	92.3%	75.0%
2	QC 1762	2	Α	215.9	3.79	4.83	3.57	94.2%	30.7%	89.0%
3	QC 1763	3	Α	195.7	3.64	4.76	5.88	88.2%	69.4%	77.1%
4	QC 1764	4	В	219.8	3.83	5.01	9.47	90.1%	88.4%	87.4%
5	QC 1765	5	Α	190.6	3.70	4.47	3.63	79.2%	36.1%	57.6%
6	QC 1766	6	В	232.7	3.99	5.17	7.60	89.3%	71.9%	86.0%
7	QC 1767	7	D	218.3	3.89	4.85	7.09	89.1%	61.0%	84.4%
8	QC 1768	8	D	230.3	3.68	4.98	4.83	86.5%	43.8%	79.1%
9	QC 1769	9	D	226.2	3.84	5.03	6.50	88.3%	53.1%	83.5%
10	QC 1770	10	Α	223.6	3.76	4.87	8.78	89.3%	75.5%	85.9%
11	QC 1771	11	D	231.5	3.82	5.02	6.11	87.4%	64.3%	81.8%
12	QC 1772	12	D	236.8	3.93	5.10	10.24	91.5%	96.7%	90.4%
13	QC 1773	13	С	189.8	3.75	4.74	5.31	86.5%	52.1%	72.1%
14	QC 1774	14	С	209.9	3.68	5.01	6.60	90.5%	52.6%	85.6%
15	QC 1775	15	В	203.0	3.78	4.85	9.38	90.4%	89.7%	85.1%
16	QC 1776	16	D	233.1	3.76	4.83	7.99	88.7%	69.6%	84.8%
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