

liar area of two inches square was cut out of the centre of the full comb, the caps of the cells carefully removed, and the honey extracted with the extractor and finally by successive exhaustions with cold water. The empty honey comb was then allowed to dry in the air and weighed.

TABLE OF AVERAGES.

Designating Letter.	Name of Wax and Mill	Milling Temperature	Average weight of 2 in. Square of Empty Honey Combs	Average weight in Grammes of Wax added by Bees	Average Percentage of Wax Added by Bees.
A & B	Choice Wax, Root mill	89 F.	2.6587	1.5377	111.1
C & D	Foundation in general use	120 F.	2.7330	1.5290	126.9
E & F	Heavy sheets, Root mill	120 F.	2.6227	1.1082	78.3
G & H	Inferior Wax, Root mill	89 F.	2.7457	1.4300	108.6
I & J	Choice Wax, Given press	120 F.	2.5103	1.3925	116.0
K & L	Patent process 12 ft square	120 F.	2.6733	1.4495	118.4
M	Choice Wax, Given press	120 F.	3.6565	1.2553	69.1
N	Patent process 15 ft square	120 F.	2.7605	1.7025	172.5
O	Inferior Wax, Given press	120 F.	2.9115	1.8185	166.4
P	Inferior Wax, Given press	120 F.	3.0081	1.4270	90.0

The foregoing tables give in consecutive form the data obtained and the averages therefrom.

PARTICULARS respecting the color and appearance of the foundations and their resulting honey-comb are contained in the subjoined memorandum:

A & B—Foundation, nearly white, clear and bright; in the comb it was only a

shade darker than the cells.

C & D—Foundation, a shade darker than A, but almost white. Honey-comb very similar to A.

E & F—Foundation, a bright yellow, clear; in comb several shades darker than cells, color gradually diminishing from foundation plate to top of cells.

G & H—Foundation very pale yellow; in comb it is slightly more yellow in inner section than in outer. Somewhat darker than wax of cells.

I & J—Foundation, brownish yellow, not so light as E. In comb it is considerably darker than cells, color shading off from centre.

K & L—Foundation, almost identical in color with that of preceding; in comb, yellowish brown and considerably darker than the cells, color shading off as in I & J. On the whole, very similar in appearance to the preceding.

M—Foundation, a very pale yellow, in color, comes between F and A; foundation in comb almost white, scarcely any difference in color to be distinguished between it and the cells.

N—Foundation, a bright yellow, a little lighter in color than E; foundation in comb, color almost gone and in this particular scarcely distinguishable from cells.

O—Foundation, bright yellow, a shade darker than N, probably owing to greater thickness; foundation in comb, pale yellow and in this respect differing from N. Does not this show the same shading off from centre as noticed in some of the heavier foundations.

P—Foundation, deep yellowish brown, the darkest in the series, appears to be more elastic than M, which is about the same weight and from the same mill; foundation in comb, brownish yellow, color extending about one half the depth of the cells.

#### DEDUCTIONS MADE FROM THE ABOVE DATA.

1. That a certain minimum of wax is apparently required for the construction and strength of the cells, although not necessarily the same weight is required in every case.

2. That when a light (in weight) foundation is applied, the bees make up the deficiency; in other words, the weight of wax produced by the bees is inversely proportional to the amount of wax supplied as foundation. This is well illustrated by M and O, and is borne out to a greater or lesser extent (with one or two exceptions) by the other members of the series. It points emphatically to the economy of supplying the bees with foundation of not more than seven and a half feet to eight feet to a pound.