

HALACHIC AND HASHKAFIC ISSUES IN CONTEMPORARY SOCIETY

SERIES 2: 63 - HONEY OU ISRAEL CENTER - SUMMER 2023

• Over the coming shiurim we will focus on the kashrut of some unusual foods, including the fascinating recent discussion concerning genetically engineered meat. To start the series, we will look at the apparently simple, but halachically rich subject of honey!

A] HONEY IN TANACH

1. וְאָרֶץ לְהַצִּילוֹ מִיַּד מִצְרַיִם וְלְהַעֲלֹתוֹ מִן־הָאֶרֶץ הַהוּא אֶל־אֶרֶץ טוֹבָה וְרַחֲבָה אֶל־אֶרֶץ זָבַת חֶלֶב וְדָבָשׁ אֶל־מִקּוֹם הַכְּנַעֲנִי וְהַחִתִּי וְהָאֱמֹרִי וְהַפְּרִזִּי וְהַחִוִּי וְהַיְבוּסִי.

שמות ג:ח

Eretz Yisrael is praised 20 times in Tanach as a Land flowing with 'milk and honey'.

2. אֶרֶץ חֹטֶה וְשֹׁעֵרָה וְגִבּוֹן וְתַאֲנָה וְרִמּוֹן אֶרֶץ־זֵית שֶׁמֶן וְדָבָשׁ.

דברים ח:ח

Eretz Yisrael is praised for many fruits, including 'dvash'.

3. רְאִישֵׁית בְּכוּרֵי אֲדָמַתְךָ תָּבִיא בֵּית ה' אֶל־קִידָה.

שמות לד:כו

There is a mitzvah to bring Bikurim - first fruits of the land - to the Mikdash.

4. (כו) רְאִישֵׁית בְּכוּרֵי אֲדָמַתְךָ - מִשְׁצַעֲתָהּ הַמִּיּוֹן הַחֲמוּרִים שֶׁצֶחַח אֶרֶץ (דברים ח:ח) אֶרֶץ חֹטֶה וְשֹׁעֵרָה וְגִבּוֹן וְתַאֲנָה וְרִמּוֹן אֶרֶץ זֵית שֶׁמֶן דָּבָשׁ - הוּא דָבַשׁ תַּמְרִים.

רש"י שמות לד:כו

Bikurim come from the 7 Minim and must be fruits of the Land. On that basis the 'dvash' for which Eretz Yisrael is praised, is date honey².

5. (יא) וְכָל דָּבַשׁ - כָּל מִתִּיקַת פְּרֵי קְרוּיָה 'דָּבַשׁ'.

רש"י ויקרא ב:יא

In the context of the prohibition to bring 'dvash' with the korbanot, Rashi explains that any fruit sugar is called 'dvash'.

6. כָּל־הַמִּנְחָה אֲשֶׁר תִּקְרִיבוּ לָהּ לֹא תַעֲשֶׂה חֲמֵץ כִּי כָל־שֶׂאֵר וְכָל־דָּבַשׁ לֹא־תִקְטְרוּ מִמֶּנּוּ אִשָּׁה לָהּ: קָרְבַּן רְאִישֵׁית תִּקְרִיבוּ אֹתָם לָהּ וְאֶל־הַמִּזְבֵּחַ לֹא־יָעֲלוּ לָרִיחַ נִיחָח.

ויקרא ב:יא-יב

The Torah prohibits bringing any 'seor' or 'dvash' as part of a sacrifice. The one exception is the 'korban reishit', which contains both seor and dvash. This is brought to the Temple, although not offered up on the mizbeach.

1. R. Reuven Margoliot (HaMikra VahaMesora, Jerusalem 5749, p62-64) suggests that chalav and dvash are in fact white wine and fig honey. Wine and figs are often mentioned together throughout Tanach (eg Yishayau 34:4, Yirmiyahu 8:13, Yoel 2:22).

2. Dvash is mentioned 53 times in Tanach. Almost all of these refer to the sweetness of fruits. See also Shu't Radvaz 962, where he analyzes the different uses of the expression 'dvash' and observes that *dvash* in Tanach can mean fruit honey or bees honey, but *dvash* in Chazal normally means bee honey.

7. (יב) קרבן ראשית תקריבו – מה יש לך להביא מן השאור ומן הדבש? קרבן ראשית שתי הלחם של ענרת הבאים מן השאור. שנאמר (ויקרא כג:ח) חמץ תאפינה. וזכורים מן הדבש כמו זכורי תאנים ותמרים.

רש"י ויקרא ב"ב

Rashi, quoting from Torah Cohanim, explains that dvash is brought as part of the Bikurim - first fruits. Hence it must be date or fig honey.

8. (ח) וישב מימים לקחתה ויסר לראות את מפלת הארץ והלה עזת דבורים בגוית הארץ ודבש: (ט) וירדהו אל-כפיו וילך הלוך ואכל וילך אל-אביו ואל-אמו ויתן להם ולאכלו ולא-הגיד להם כי מגוית הארץ רדה הדבש.

שופטים יד-ח-ט

But bee³ honey does make an important appearance in Tanach. Here we see that Shimshon ate from the honey and gave some to his parents.

9. (כה) וכל-הארץ באו ביער ויהי דבש על-פני השדה: (כו) ויבא העם אל-הלער והנה הלך דבש ואין-משגיג דו אל-פיו כי-גרא העם את-השבעה: (כז) ויונתנו לא-שמע בהשביע אביו את-העם וישלח את-קצה המטה אשר בידו ויטבל אותה ביערת הדבש וישב דו אל-פיו ותארנה עיניו: (כח) ויען איש מהעם ולאמר השבע השביע אביך את-העם לאמר ארור האיש אשר-לאכל לחם היום ויעף העם: (כט) ולאמר יונתנו עבר אבי את-הארץ ואר-נא כי-ארו עיני כי טעמתי מעט דבש הזה.

שמואל א' יד-כה-כט

Shaul imposed an oath on the Jewish army not to eat before the battle. Yonatan, who had not heard about the oath, ate from 'dvash'⁴ in the fields.

10. (י) יראת ה' טהורה עומדת לעד משפטיה' אמת צדקו יחדו: (יא) הנחמדים מזנהב ומפז רב ומתוקים מדבש ונפת ציפים.

תהלים יט-יא

The reference to dvash here is to bee honey, since it appears together with a reference to honeycomb.

B] WHAT IS HONEY?

11. Bees need two different kinds of food. One is honey made from nectar, the sugary juice⁵ that collects in the heart of the flowers. The other comes from the anthers of flowers, which contain numerous small grains called pollen. ...

Most bees gather only pollen or nectar. As she sucks the nectar from the flower, it is stored in her special honey stomach ready to be transferred to the honey-making bees in the hive. If hungry she opens a valve in the nectar "sac" and a portion of the payload passes through to her own stomach to be converted to energy for her own needs.

The bee is a marvelous flying machine. She can carry a payload of nectar or pollen close to her own weight. Consider that even the most advanced design in aircraft can only take off with a load one-quarter of its own weight and you'll appreciate the miracle that the honeybee can remain airborne with such a load.

When her nectar "sacs" are full, the honeybee returns to the hive. Nectar is delivered to one of the indoor bees and is then passed mouth-to-mouth⁶ from bee to bee until its moisture content is reduced from about 70% to 20%. This changes the nectar into honey

Finally, the honey is placed in storage cells and capped with beeswax in readiness for the arrival of newborn baby bees. Pollen is mixed with nectar to make "bee bread" and is fed to the larvae. A baby bee needs food rich in protein if the bee community is to flourish.

How Bees Make Honey, Australian Honey Bee Industry Council⁷

3. See <https://www.rationalistjudaism.com/p/being-beeish> concerning the comparison Chazal make between the Jewish people and bees.

4. The mefarshim differ on what dvash means in this context. Rashi explains it as sugar cane. Abarbanel and others identify it as bee's honey.

5. Nectar is mainly natural sugar (55% sucrose, 24% glucose and 21% fructose), together with other chemicals.

6. Enzymes in the bees' saliva act upon the nectar to break it down.

7. <http://honeybee.org.au/education/wonderful-world-of-honey/how-bees-make-honey/and>

<https://honeybee.org.au/wp-content/uploads/2022/06/220628-AHBIC-Fact-Sheet-How-bees-make-honey.pdf>

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C] WHY IS HONEY KOSHER?

12. ... בהמה טהורה שילדה כמין בהמה טמאה מותר באכילה. וטמאה שילדה כמין בהמה טהורה אסור באכילה **שהיוצא מהטמא טמא והיוצא מן הטהור טהור**.

משנה בכורות פרק א משנה ב

The Mishna rules that anything which comes out of a non-kosher animal is not kosher. This would include not only offspring (even if it otherwise looks kosher), but also milk, secretions etc.

13. בעו מינה מרב ששת - מי רגלים של חמור מהו? ותיבעי להו דסוסים וגמלים! דסוסים וגמלים לא מיבעיא להו דלא עכירי ולא דמו לחלב. **מיא עול מיא נפוק**. כי קמיבעיא להו דחמור דעכירי ודמו לחלב. מאי? מגופיה קא מימצצי ואסירי או דלמא מיא עול מיא נפוק והאי דעכירי הבלא דבישרא הוא? ואיכא דאמרי - דסוסים וגמלים לא קא מיבעיא להו דלא שתו אינשי. כי קמיבעיא להו דחמור דשתו אינשי ומעלו לירקונא. מאי? אמר להו רב ששת תניתנה - 'היוצא מן הטמא טמא והיוצא מן הטהור טהור'. והני נמי מטמא קאתי. מיתבי! מפני מה אמרו דבש דבורים מותר? מפני שמכניסות אותו לגופן (רשי - שאוכלין מפרחי האילן ומכן נעשה הדבש צמטיהו) ואין ממצות אותו מגופן. (רשי - ... וקשיא לרז ששת דכא ככא כיון דלאו מגופייהו מימלו שרי). הוא דאמר כר' יעקב דאמר **דובשא רחמנא שרייה**. דתניא ר' יעקב אומר (ויקרא יא:כא) **אֶת־זֶה תֹאכְלוּ מִפֶּלֶךְ הָעֹף**. זה אתה אוכל, ואי אתה אוכל שרץ עוף טמא. שרץ עוף טמא בהדיא כתיב! אלא שרץ עוף טמא אי אתה אוכל אבל אתה אוכל מה שעוף טמא משריץ. ואיזה זה זה? **דבש דבורים**. יכול אף דבש הגזין והצירעין? אמרת לא. ומה ראית לרבות דבורים ולהוציא הגזין והצירעין? מרבה אני דבש דבורים שאין לו שם לווי, ומוציא אני דבש הגזין והצירעין שיש לו שם לווי. כמאן אזלא הא דתניא דבש הגזין והצירעין טהור ומותר באכילה? דלא כרבי יעקב.

בכורות ז.ז.

The Gemara wishes to establish the kashrut status of donkey urine, which was used as a medication for jaundice⁸. Rav Sheshet rules it to be non-kosher since it comes out of the donkey, even if it is not an actual secretion of the animal. The Gemara then asks why this is different to honey. According to one Tannaitic source, honey is kosher because, although it is ingested into the bee's body and then expelled, it is not specifically a secretion of the bee. On that basis, why should donkey urine not also be kosher? Like honey, it is not specifically a secretion of the donkey. The Gemara answers that Rav Sheshet is following a different Tannaitic opinion - that of R. Ya'akov - who rules that honey SHOULD be non-kosher simply on the basis that it is expelled from a non-kosher animal, but the Torah makes an exception to this rule in the case of bee honey (but not other honies). Our Gemara clarifies that R. Ya'akov, who prohibits wasp honey, disagreed with Mishna, which permits it.

As such, we see 2 different reasons given by the Tannaim as to why honey is kosher:

- (i) It is not really a secretion of the bee (and by implication, if it were a secretion, it would be treif).
- (ii) It SHOULD be treif, but the Torah made a specific exception for bee honey.

We will need to examine below, based on these reasons, the kashrut status of various bee products, such as:

- royal jelly
- beeswax
- bee venom
- propolis

14. שבעה משקין הן: הטל, והמים, היין, והשמן, והדם, והחלב, **ודבש דבורים**. דבש צרעים - טהור ומותר באכילה.

משנה מכשירין ז:ד

Bee honey is one of the '7 Mashkim' for the purposes of Tuma and Tahara. The Mishna also allows wasp honey.

15. מנין לדבש שהוא משקה? שנ' (דברים לביג) **וַיִּקְהוּ דְּבַשׁ מִשְׁלַע**

תוספתא שבת פרק ח הלכה כה

This is learned out from a verse in Ha'azinu.

16. **ומותר באכילה** דסלקא דעתך אמינא דדוקא דבש דבורים רבייה קרא להתיירא שאין לו שם לווי, אצל דבש צרעים שיש לו שם לווי לא יכא מותר. קמ"ל דבש צרעים טהור ומותר. דמפני מה אמרו דבש דבורים מותר? מפני שמכניסות אותו לגופן ואין ממלות אותו מגופן. דבש צרעים נמי מכניסות אותו לגופן ואין ממלות אותו מגופן.

ר' עובדיה מברטנורא מכשירין ז:ד

Rav Ovadia Mibartenura on the Mishna in Machshirin explains why wasp honey is also kosher. The main reason seems to be that the honey is NOT secreted by the wasp but, as with bees, is simply collected, ingested and expelled.

8. On the use of human and animal urine for medical treatment in the ancient and modern worlds see <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3032615/>. The Chazon Ish writes that urine is not inherently disgusting, but is only disgusting to people once they know of its origins.

D] PURE HONEY - THE HALACHA

17. דבש דבורים ודבש צרעים מתר מפני שאינו מתמצית גופן אלא כונסין אותו מן העשבים בתוך פיהו ומקיאין אותו בפירות כדי שימצאו אותו לאכל ממנו בימות הגשמים.

רמב"ם הל' מאכלות אסורות ג'א

The Rambam permits bee and wasp honey on the basis that the honey is not secreted, but simply ingested and expelled.

18. ר"ת ז"ל פסק צספר הישר דלא כר' יעקב משום דסתם דמס' מכשירין דלא כוותיה ... ותימה הוא שפסק כמו מתני' דמס' מכשירין כיון דרז ששת לא סבר כוותיה דהא איכו סבר כר' יעקב! ... ובשל תורה הלך אחר המחמיר וכן הלכתא דדבש גיזין ולירעין אסור.

רא"ש מסכת בכורות פרק א

The Rosh rules like Rav Sheshet that wasp honey is NOT kosher since he follows the view that bee honey is the only exception to the general rule. He does not therefore follow the reasoning of 'ingestion and expulsion'.

19. ט דבש צרעין וגיזין (פ"י מיני דבורים וצרעין הם) מותר. ויש מי שאוסר (רא"ש ורמב"ן). הגה: ואין לנו לריכין לחוש לו כי אינו מלוי זינינו כלל.

שולחן ערוך יוד פא"ט

The Shulchan Aruch permits bee honey and brings a difference of opinion on wasp honey, which the Rema writes is no longer practically relevant. But that difference of opinions may reflect the reasons why honey is kosher. Is it a special exception for bees only, or a rationale based on the production of the honey?

20. הרי הוא כשאר דבש - ... דמצרך עליו שכל ... וזאת אפילו החולקין בדבש תמרים מודו בדבש דבורים, דאע"ג דדבורים מכניסין מי פירות לתוך גופן ומוצאין מהן ועי"ז נעשה בדבש מ"מ אין טעם הפירות נרגש כלל בדבש.

משנה ברורה ס' רד ס'ק נ

The Mishna Berura rules that the beracha on honey is shehakol. He also quotes the reason of the bees ingesting and expelling the nectar.

E] KASHRUT CONCERNS**E1] THE BEE'S KNEES⁹**

21. יש לתמוך עכשיו היאך לנו אוכלים דבש דבורים והלא רגלי הדבורים מעורבים בדבש! ואף על גב דהוי פגם מ"מ כשרן עלמו דאיפגם מיסתר לכ"ע! לכ"נ לר"ת דודאי רגלי הדבורים כיון דעלמות בעלמא נינהו מותרים

תוס' ע"ז ס"ט. ד"ה ההוא

Tosafot raise the issue of bee-bits which are stuck in the honey. How can we eat pieces of the insect!? He is however prepared to be lenient on the legs, since these are merely 'bones' which are effectively inedible.

22. ח דבש דבורים מותר. ואף על פי שגופי הדבורים מעורבים בו, וכשמפרישין הדבש מהם מחממין ומרתיחין אותן עמהם מותר משום דהוי נותן טעם לפגם

שולחן ערוך יוד פא"ח-ט

The Shulchan Aruch rules that once the honey is heated, and these 'bee-bits' dissolve, the mixture is kosher since the taste of the bee-bits is pagum. They cannot, however, be eaten when still visible. The Pri Chadash brings the leniency of Tosafot regarding the bee-legs¹⁰.

23. ... יש לזהר לבלי לאכול דבש קודם סינון מפני תערובת הדבורים ונמלים דשכיח בדבש. וכן המנהג פשוט ואין לשנות.

ערוך השולחן יורה דעה סימן פא

The Aruch HaShulchan rules that, where there is a concern of mixed-in bee parts, the honey must be filtered.

9. According to The Guardian, the expression *the bee's knees* may derive from a shortening of 'the be all and the end all of everything', which was shortened to "the B's and E's" and then to 'the bee's knees'. Others believe it derives from 'it's the business'.

10. The Rosh (Avoda Zara 5:11) quotes Rabbeinu Tam as also being lenient regarding the wings, which he says are 'k'afar b'alma' - like dust and therefore not treif.

E2] ADDITIVES

- Some cheaper honeys¹¹ contain added flavorings (eg orange flavoring rather than the natural aroma of orange in orange-blossom honey.) These would require kashrut certification. 100% pure organic honey has no additives and does not require kashrut certification¹².
- Some additives such as corn syrup will be a problem of kitniyot on Pesach.

E3] OTHER BEE PRODUCTS

Royal Jelly

• Royal Jelly is a highly nutritious substance secreted from the hypopharyngeal and mandibular glands located in the head of the bee. Some claim that it has homeopathic qualities¹³. It is used to feed all bee larvae, whether they are destined to become drones (males), workers (sterile females) or queens (fertile females). The larvae are fed on it for 3 days to develop. Only those destined to be queens continue to be fed on Royal Jelly after that.¹⁴

- Is it kosher? That depends¹⁵ on the reason why honey is kosher.
 - (i) If the reason is because it is not secreted by the bee, merely ingested and expelled, then royal jelly, which IS a secretion, will be treif.
 - (ii) If the reason is that products of the bee are simply an exception to the rule, royal jelly could also be kosher. However, that exemption may only relate to honey-like products and not to Royal Jelly, which looks nothing like honey.

24. הנני להעיר בנוגע להאמור בספרו ציץ אליעזר ח"א סי' נ"ט שמזון המלכות דינו כדבש. ומסתמך ע"ז שלא הזכירו חז"ל לחלק בין מזון זה לדבש. ולענ"ד הוא תמוה כיון שהוא מר כלענה ואיננו מאכל כלל ולא שייך כלל לדבש. א"כ למה יזכירו חז"ל? ומהיכ"ת נימא דאינו חלוק מכל היוצא מן הטמא דאסור. והנה עד לפני מספר שנים כאשר נשאלתי על כך, הוריתי תמיד להיתר בחשבי שיוצא מן הטמא אשר בתחילתו אינו ראוי למאכל אדם דינו כנבילה סרוחה מעיקרא דלא חייל עלה כלל שום איסור, אך אפשר דגם זה חשיב כראוי לאדם וגם מר שלומאי שיחי' אמר לי שלדעתו זה ראוי לאכילה. ולכן מאז איני אומר בזה לא איסור ולא היתר.

שו"ת מנחת שלמה תניינא (ב - ג) סימן סד

The Tzitz Eliezer¹⁶ permitted¹⁷ Royal Jelly. Rav Shlomo Zalman is unsure and refrains from giving a heter or issur!

The OU¹⁸ rules that Royal Jelly is not kosher. Star-K¹⁹ bring different opinions and rules that it 'should not be eaten'. Kof-K also bring different opinions on the matter and refrain from giving a psak.

Honeycomb

- Honeycomb is kosher, although one needs to look out for bee parts!
- Honey may not be squeezed out of the comb on Shabbat. This is prohibited under the melacha of Dash²⁰.

Bee Pollen

- Bees brush pollen with their legs and press it into baskets on their legs. They then add traces of nectar and bee saliva to compact it. Star-K and Kof-K rule that this is kosher, notwithstanding the traces of bee-saliva.

11. See <https://www.mybeeline.co/en/p/how-can-we-differentiate-100-pure-honey-and-adulterated-honey>

12. See Star-K below. There is no concern of bishul akum for honey since it is edible raw - see Kof-K below. Some kashrut agencies are concerned that honey is normally heated before bottling to make it flow easily through the equipment. That same bottling equipment might also be used for other viscous products such as tomato sauces (which will require additional heating to prevent spoilage) which have kashrut concerns due the meat, cheese and other items often added to them. As such, they recommend that honey should not be purchased on a retail level without hashgachah - see https://www.crcweb.org/kosher_articles/milk_and_honey.php.

13. On the Kof-K website they claim that it 'increases life span, tones and strengthens your skin. It strengthens and stimulates your immune system, helps heal wounds, and gradually decreases pains. It also increases appetite, relieves weak and tired eyes, and many other benefits'.

14. This greatly affects their development, longevity (40 times longer than regular bees) and fertility.

15. There are also other factors, including whether the Royal Jelly is truly edible.

16. 11:59.

17. As did Rav Ovadia Yosef for those in need - see Yalkut Yosef p159-162. Rav Moshe Sternbuch (Teshuvot Vehanagot 4, YD:188, pp. 180-182) also permits it hesitatingly, but only for those who are ill and only if it will definitely help.

18. See <https://oukosher.org/blog/consumer-kosher/halachos-of-the-hive/>

19. See <https://www.star-k.org/articles/kashrus-kurrents/624/do-bee-dont-bee/>. They quote R. Shlomo Zalman Auerbach (Minchat Shlomo 2:64), who states that he cannot "matir or assur" this product. They also quote Tzitz Eliezer 11:59 who allows it (see source 24 above).

20. If a honeycomb is still attached to ground, squeezing out honey may also be the melacha of Tolesh.

Bee Bread (Ambrosia)

Bee bread is a mixture of honey and pollen and is kosher.

Beeswax²¹

- Star-K rules that, since this is not edible, it is kosher, as are any extracts derived from it.
- Kof-K²² brings a number of sources²³ which permit eating beeswax.

Bee Propolis

- Propolis is a resin made by the bees from a combination of tree resins, bee saliva and beeswax. The bees use it to glue together the hive.
- Propolis has been used for thousands of years in traditional medicines. It is sometimes used to make cough drops and treat mouth pain and cold sores.
- Kof-K rules that any bee-product in propolis is batel²⁴, especially since the raw end-product is not edible.
- Star-K rules that propolis is kosher, unless mixed with other additives (eg alcohol).

Bee Venom

- This is extracted from the venom glands of bees and used as an anti-inflammatory agent and for the treatment of arthritis.
- It is secreted by the bee and is therefore treif as a 'yotzei min hatamei'.
- Star-K rules that it should be taken orally as a medication only if batel beshishim and that a (not-dangerously) sick person can eat it in an abnormal manner.

Apis Mellifica

- This is a homeopathic remedy is derived from the actual body of the honeybee and is therefore not kosher.
- However, in most homeopathic remedies the active ingredient is less than one sixtieth of the product and is therefore batel beshishim²⁵. If the inactive ingredients are kosher, and the body parts of the honeybee are batel and non-recognizable, this product would be halachically permissible²⁶.

E4] 'HONEYDEW' OR 'FOREST HONEY'

- This is not produced by bees only, but by bees in a partnership with aphids!
- The aphids extract the sap from trees and then expel a sugary secretion. The bees collect and process it.
- The OU rules²⁷ that this honey 'should be avoided'.²⁸

E5] 'MELIPONA HONEY'

- This is produced by a type of stingless bee in Mexico. Since this may be a type of wasp honey it is not permitted.

21. Beeswax is a substance which is secreted from the wax glands in a bee's stomach. This emerges as a transparent liquid that the bee chews and molds into the cell on their comb. The honey combs are melted and filtered to produce a clean wax. Its color may vary from white to yellow or brown which is because of the pollen that they may have eaten. The bees use this wax to create a honey comb in which honey is stored in. In the honey comb the bees grow and form a larva into mature bees. Beeswax is used in a wide variety of things, such as a coating to fruits, jelly beans, candles, ear plugs, cosmetics, polishes, sewing, and soap making. (See Kof-K infra).

22. <https://www.kof-k.org/articles/100208101005W-22%20Kashrus%20and%20Halachos%20of%20Honey.pdf>

23. Including Rav Shlomo Zalman Auerbach, Rav Moshe Feinstein and Rav Belsky.

24. Propolis is comprised of resins (45-55%), waxes and fatty acids (25-35%), essential oils (10%), pollen (5%), and other minerals (5%).

25. Since the mixture was made by non-Jews for the general market, there is no problem of mevatin issur lechatchila.

26. See Star-K ibid.

27. <http://kosherquest.org/from-the-ou-honey/>

28. A separate halachic issue concerning honey relates to *hafrashat challah*. If a sufficient quantity of flour is used (2.6 lbs) one would normally make a beracha on the separation of challah from the dough. However, the beracha can only be made if the flour is kneaded with one of the '7 mashkim', which include honey. If flour is kneaded with fruit juice alone, no beracha is made on the separation. See Shulchan Aruch and Rema Y.D. 329:10.