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Survey of Recent Halakhic Periodical Literature

HARVESTING WHEAT FOR *MAZAH*: WHEN AND WHERE?

On a torrid day in mid-June I had an intriguing experience. I watched as some sixty individuals, mostly young hasidic men, gathered in a New Jersey wheat field to make preparations for harvesting wheat to be used for baking *mazah*. Most were draped in white cotton cloaks and wore white hoods over their heads to repel the heat of the sun. From the distance the group closely resembled an assemblage of the Ku Klux Klan. But on further observation this was clearly a far more benign gathering. The men were smiling, youthful, energetic and industrious, engaged in performing a *mizvah* with zeal and joy. At the stroke of astronomical noon, as confirmed by satellite signal received by a technologically advanced timepiece, the group in unison recited the scriptural verses commanding safeguarding *mazot* followed by a declaration that the acts they were about to perform were explicitly dedicated to fulfilling the commandment concerning *mazah*. Cloth gloves were donned, industrial scissors were produced and the cutting began.

My visit to the wheat field was the culmination of a sedentary, but revelatory, scholarly investigation. An article in a current periodical regarding halakhic issues concerning the timing and harvesting of wheat for baking *mazot* had sparked my interest. At the time of my initial perusal of the material I was unaware of the fact that this topic had already spawned a voluminous but poorly circulated literature. Slowly I discovered a staggering array of letters, pamphlets and monographs as well as several full-court *sefarim*, mostly self-published and all of fairly recent vintage, devoted to this topic.[1] Sadly, some aspects of the ongoing

[1] See R. Ya'akov Zevi Goldstein, "*Be-Inyan Zman Kezirat Hittim le-Mazot Mizvah*," *Or Yisra'el*, no. 43 (Nisan 5766); *Kuntres Bashal Kazir* (Monsey, N.Y., 5762); *Kuntres Helev Hittim* (Sivan 5765); R. Yehoshu'a Heschel Deutsch, *Kuntres Shimur le-Shmah*; *Kovez Birurei Hittim* (Monroe, N.Y., Adar 5767); *Kuntres Mesorat Avoteinu* (Brooklyn, N.Y., 5771); *Birurei Devarim be-Inyan Hittei Arizona* (Lakewood, N.J., 5772); R. Yitzchak Stein, *Kezirat ha-Hittim u-Beriratam*, 2nd ed. (5766), republished with same date, additional material and different pagination; R. Ya'akov Zevi Goldstein, *Kezir Hittim* (Brooklyn, N.Y., 5765); R. Ya'akov Zevi Goldstein,

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debate are fueled by factional conflict between devotees of competing hasidic figures and descend into unbecoming polemic.[2] Nevertheless, for the most part, the literature embodies serious discussion of intricacies of Jewish law.

Over a century and a half ago, R. Jacob Ettlinger, famed author of *Arukh la-Ner*, novellae on various tractates of the Talmud, lamented the decline of rabbinic scholarship in Western Europe and the limited audience for works such as his. However, he asserted with conviction that "*lo alman Yisra'el*" — "Israel is not bereft"[3] and launched a pioneering Hebrew-language journal entitled "*Shomer Zion ha-Ne'eman — The Faithful Guardian of Zion*" to demonstrate confidence in the continuity of talmudic study and foster the pursuit of rabbinic scholarship.

To witness a thriving and burgeoning hasidic Torah-oriented community of scholars in contemporary America engaged in study and debate of nuances of Halakhah, to examine the intellectual product of their efforts as it appears on the printed page and then to see implementation of their conclusions in practice — even when those conclusions are not univocal — is to celebrate the maturation of a learned, dedicated, committed and fervent Torah community on these shores. *Akhshar dara*!

Likkut mi-Pi Sefarim ve-Soferim (n.d.); R. Yitzchak Stein, *Et Kezir Hittim* (Brooklyn, N.Y., Tammuz 5765); R. Joel Rosenberg, *Helev Hittim Yasbi'ekh* (Brooklyn, N.Y., 5772); R Abraham Laufer, *Ha-Eshel be-Ramah,* vol. I (Brooklyn, N.Y., Adar 5776, 2nd ed., 21 Adar 5766), vol. II (Brooklyn, N.Y., 25 Shvat 5767, 2nd ed., Kislev 5769), [pamphlet] no. 2 (Brooklyn, N.Y., 25 Shevat 5767, 2nd ed., 21 Adar 5767); [pamphlet] no. 3 (Brooklyn, N.Y., 13 Sivan 5767, 2nd ed., 17 Adar II 5768) [pamphlet] *Ha-Eshel be-Remah*: *Mazah Meluhah* (Brooklyn, N.Y., 7 Adar 5771), [pamphlet] no. 4 (Brooklyn, N.Y., 7 Adar 5773); and, undoubtedly, other publications unknown to this writer. The author is indebted to Rabbi Yitzchak Ya'akov Chaim for his many valuable comments.

[2] A week after the harvesting in New Jersey, a similar event took place in Yuma, Arizona and was reported in a featured story with accompanying photographs in the *New York Times*, June 29, 2013, p. A1. Contrary to the statement of a sociologist quoted in the news report, both endeavors were designed to obviate a significant halakhic concern, as will be explained. The modalities employed in New Jersey and Arizona have themselves been subjected to scrutiny on halakhic grounds. Those issues have been analyzed by competent, disinterested rabbinic scholars. It is a sad reflection on our community that, in some quarters, the issue has been used to fuel internecine rivalry with the result that uninformed observers remain ignorant of the quite genuine underlying concerns and the sincerity with which they have been addressed by reputable scholars. It is the author's fervent hope that this modest effort will serve in some measure to dispel confusion.

[3] *Arukh la-Ner*, *Yevamot* (Altona, 5610), introduction.

I.

Wheat and flour used for baking *mazot* for use on *Pesah* require *shemirah*, i.e., the kernels of wheat and flour must be "guarded" to assure that they do not become *hamez*. *Shemirah* is required for two separate and distinct reasons: 1) There is empirical concern that contact with water can cause the flour or the kernels of wheat to ferment and become *hamez*. 2) The commandment "And you shall safeguard the *mazot*" (Exodus 12:17) requires active and conscious "safeguarding" for the purpose of fulfilling the *mizvah* even if there is no actual reason to suspect the occurrence of a *hamez*–causing event. The latter consideration applies only to the *mazot* consumed on the first two nights of Passover in order to fulfill the *mizvah* of "In the evening you shall eat *mazot*" (Exodus 12:18).[4] For the balance of the holiday there is no positive obligation to eat *mazah*. To be sure, *hamez* is forbidden during the entire period of the festival but partaking of *mazah* is not a requirement. It is quite possible to subsist upon non-grain foods to which the concept of *hamez* does not pertain. Hence *mazah* known to be free of any suspicion of *hamez* but made from wheat and flour that have not been expressly safeguarded for the purpose of baking *mazah* for use in fulfilling the biblical command is entirely acceptable for use on *Pesah* other than in conjunction with fulfillment of the *mizvah* incumbent upon Jews on the first two evenings of the festival.

All authorities agree that fully mature kernels of wheat may become *hamez* if they are sufficiently exposed to water but that, generally, there no reason to assume that there has been inadvertent contact with moisture. The commandment "And you shall safeguard the *mazot*" requires not only that *himuz* (fermentation or leavening) not occur but that *mazot* be actively safeguarded to prevent the possibility of *himuz* from arising. There is significant controversy among early-day authorities regarding the stages of processing that require such supervision. There are three possible junctures for commencement of *shemirah*: 1) the time that the natural process of leavening begins, *viz.*, the moment that water is added to the flour; 2) when the kernels are crushed and ground into flour since, from that moment on, it is possible that the crushed kernels or flour may

[4] It is for that reason that *Bi'ur Halakhah* 453:4, citing *Tosefet Yerushalayim*, questions the propriety of shipping flour for baking *mazot* by train without an accompanying custodian even when there is no fear of substitution or of rain coming into contact with the flour. See also *Sedei Hemed*, *ma'arekhet hamez u-mazah*, no. 11, sec. 6.

For an intriguing report involving R. Joseph Ber Soloveitchik and his son R. Chaim Soloveitchik with regard to transport of *mazot* by train, see Menachem Mendel Gerlitz, *Haggadah shel Pesah mi-Bet Levi*, 2nd ed. (Jerusalem, 5743), p. 301.

come into contact with water and any contact with moisture can prematurely cause the leavening process to commence; and 3) when the wheat is harvested since, albeit contact with water is highly unlikely, such contact may cause the process of fermentation to begin within the kernels even before they are milled into flour.

The empirical consideration of possible leavening is a cause for concern that may arise even before the wheat is cut. All authorities concede that, generally, wheat does not become *hamez* as long as the kernels have not fully ripened.[5] Many early-day authorities and, most significantly, *Teshuvot ha-Rashba*, VII, no. 20, cited by *Bet Yosef*, *Orah Hayyim* 467:5, maintain that upon becoming "completely dry (*she-nityabesh le-gamri*) and no longer requiring nutrients (*ein zarikh yenikah*)" the kernels may become *hamez* upon contact with water even though the wheat stalks are still attached to the ground.[6] Kernels of wheat become completely dry when they have fully matured and no longer draw nutrients from the ground, i.e., the process of growth and maturation has drawn to a close. *Shulhan Arukh, Orah Hayyim* 467:5, rules in accordance with Rashba in categorizing such kernels as comparable to having been "placed in a utensil and susceptible to leavening if rain falls on them."[7]

[5] See, however, *infra*, note 50 and accompanying text.

[6] Wheat kernels do not germinate until they have become physiologically mature. Pre-harvest sprouting commences when rain falls upon physiologically mature kernels. Sprouting is an indication that the kernel has become *hamez*. The process of becoming *hamez* begins much earlier and may not be accompanied by any discernible change in the kernel. Rashba was concerned that heavy rain may have caused kernels to become *hamez* despite the absence of any visible change in the appearance of the kernel. Cf., *infra*, note 21.

[7] R. Joel Rosenberg, *Helev Hittim Yasbi'ekh* 6:4, cites terminology employed by four early-day authorities from which he infers that all four disagree with Rashba in their failure to distinguish between wheat that draws nutrients from the ground and wheat that no longer draws nutrients.

R. Jonah Landsofer, *Teshuvot Me'il Zedakah,* no. 69, rules against the position of Rashba in permitting use of wheat "unless there has been a torrential rainfall, strong rain, day and night, that casts the stalks and ears to the ground and beats upon them with force as if they were soaking in a utensil filled with water" and concludes explicitly "but if the rain is not so strong and has not endured for a long period of time it is not necessary to be stringent unless we see that [the kernels] are cracked." Cf., *infra*, note 10.

Many authorities similarly maintain that there is need for stringency if the appearance of the kernels has been altered as a result of rainfall. See R. Yitzchak Dov Bamberger, *Teshuvot Yad ha-Levi*, *Orah Hayyim*, no. 96; R. Jacob Ettlinger, *Teshuvot Binyan Zion he-Hadashot*, no. 5; and R. Abraham Borenstein, *Avnei Nezer*, *Orah Hayyim*, no. 529, sec. 1.

This does not imply that the slightest incidental contact with moisture necessarily causes fully-developed but unharvested wheat to become *hamez*. Rainfall, however, which occurs regularly and is often bountiful, does give rise to concern.[8] Me'iri, *Pesahim* 31b, and others recognize the problem as arising only in the event of "copious rain" that causes kernels to swell or burst. *Mishnah Berurah* 467:18 reflects that view in ruling that only excessive precipitation is a matter of concern. *Shiltei ha-Gibborim*, in his commentary on the *Rif*, *ad locum*, speaks of uncut stalks of wheat that "become drenched in water."[9] Indeed, the Gemara, *Pesahim* 40a, declares that rain "in the course of its falling does not cause grain to become *hamez* " (*agav madleihu lo mihamzi*).[10] Those sources notwithstanding,[11] a literal reading of *Teshuvot ha-Rashba* indicates that Rashba perceived a problem with regard to all fully-mature, dry kernels that have been exposed to rain[12] when

[8] See, however, *Bet Yosef*, *Orah Hayyim* 467, who cites *Safer ha-Agur* who maintains that rain sufficient to cause items coming into contact with the wheat to become moist (*tofeah al menat le-hatfiah*) is deemed to be excessive rainfall. See also *Kezir Hittim*, Part 2, note 25 and Part 4, notes 39 and 214.

In a responsum appended to R. David Nagar's *Zemah David* (Livorno, 5598), R. Chaim David Isaac ha-Kohen of Tunis rules that rain greater in quantity than the moisture of dew constitutes "excessive rainfall." R. Moshe Strug, *Teshuvot Yashiv Mosheh*, no. 198, defines excessive rainfall as longer in duration than "about an hour or two." See also R. Kalfan Moshe ha-Kohen, *Teshuvot Sho'el ve-Nish'al*, III, no. 31. See aso *Kezir Hittim*, Part 4, note 214.

[9] See also *Piskei ha-Tosafot*, *Menahot*, sec. 206; *Bet Yosef*, *Orah Hayyim* 467:2 and 467:4; *Sha'arei Teshuvah*, *Orah Hayyim* 467:12; and R. Shalom Mordecai Schwadron, *Teshuvot Maharsham*, II, no. 4 and *idem*, *Da'at Torah* 467:4.

[10] Nevertheless, the anonymous author of *Kuntres Masoret Avoteinu* (Brooklyn, 5771), p. 12, asserts that even *Me'il Zedakah* permits only wheat from which the rain sloughs off but not kernels that have been "soaked through with water and remain so for some hours." That is indeed the position of *Avnei Nezer*, *Orah Hayyim*, no. 529, sec. 12. Cf., *supra*, note 7.

[11] See, however, *Avnei Nezer*, *Orah Hayyim*, no. 529, secs. 9-12, who equates the positions of Rashba and *Shiltei ha-Gibborim*. See also *Kaf ha-Hayyim*, *Orah Hayyim* 467:39.

[12] R. Chaim Halberstam, *Teshuvot Divrei Hayyim*, II, no. 39, maintains that, although the customary practice is that even if *mazot* made of fully ripened wheat that may possibly have come into contact with rain are accepted for consumption on *Pesah,* such *mazot* cannot be deemed *shemurah* (safeguarded) for purposes of fulfilling the *mizvah* on the first two evenings of the festival. *Divrei Hayyim* argues that the commandment "and you shall safeguard" requires actual visual observation from the time that a potential *hamez*-causing event has occurred and precludes reliance upon the principle of *rov*, or majority. See Rabbi A. Brode, *Teshuvot Mizpeh Aryeh*, *Mahadura Tinyana*, *Orah Hayyim*, no. 22. Cf., *Teshuvot Maharshag*, I, no. 55 and R. Jacob Breisch, *Teshuvot Helkat Ya'akov*, *Orah Hayyim*, no. 201. That is also the position of R. Joseph Saul Nathanson, *Teshuvot Sho'el u-Meshiv, Mahadura Kamma,* III, no. 87, *Mahadura Tinyana*, III , no. 84 and *Mahdura Telita'a*, I, no. 167; R. Moshe

they no longer have need of, or use for, nutrients leached from the ground.[13] It must, however, be stressed that Rashba perceived rain as posing a problem only if the kernels of wheat have become fully mature[14] and perhaps

Schick, *Teshuvot Maharam Shik, Orah Hayyim*, no. 217, s.v. *u-memeila* and no. 125; *idem*, *Maharam Shik al Taryag Mizvot*, no. 10, sec. 4; R. Naphtali Zevi Judah Berlin, *Ha'amek She'elah*, *Parashat Zav*, sec. 2; and R. Joel Teitelbaum, *Teshuvot Divrei Yo'el*, II, *Hoshen Mishpat*, no. 136, sec. 4. See also *Teshuvot Maharam Shik*, *Orah Hayyim*, no. 130. See as well Rabbenu Manoah, *Hilkhot Hamez u-Mazah*, chap. 5 and sources cited in *Kezir Hittim*, Part 4, note 218. That view is disputed, *inter alia*, by R. Samuel Isaac Schor, *Teshuvot Minhat Shai*, no. 30; *Teshuvot Maharsham,* II, nos. 3 and 4; and R. Aryeh Balchuver, *Teshvuot Shem Aryeh*, no. 11. Cf., R. Moshe Greenwald, *Teshuvot Arugat ha-Bosem, Orah Hayyim,* no. 130.

Both Rambam, *Hilkhot Hamez u-Mazah* 5:9 and Ra'avad, *Temim De'im*, no. 26, speak of *shimur* as commencing only at the time of harvesting. See *Avnei Nezer*, *Orah Hayyim,* no. 387, sec. 10 and R. Ya'akov Yitzchak Weisz, *Teshuvot Minhat Yizhak,* II, no. 99, sec. 5. R. Jacob Ettlinger, *Teshuvot Binyan Zion ha-Hadashot,* no. 5, emphasizes that, even according to *Teshuvot ha-Rashba, shemirah* is not required until the wheat is cut.

[13] Rashba can readily be understood as implying that rainfall gives rise to a concern that any and all kernels may have come into contact with the falling rain. In a related responsum, *Teshuvot ha-Rashba*, I, no. 102, that may contradict a literal reading of this reponsum, *Teshuvot ha-Rashba*, VII, no. 20, Rashba addresses a situation in which heavy rains fell upon bundles of wheat stacked in the fields. As a result, some of the uppermost clusters of wheat germinated. The issue was whether the seemingly unaffected kernels must also be deemed to be *hamez.* Rashba replies, *inter alia*, that we may assume that the rain entered only the uppermost bundles "as is known and visually perceived" as distinct from the situation of "a ship mired in a canal [see *Pesahim* 40b] that is totally immersed in water and all that is immersed in water presumably tarries in it and can be caused to become *hamez.*"

[14] It might be argued that, contrary to the sources cited *supra*, note 12, delay in harvesting the wheat until the kernels are fully mature and no longer derive nutrients from the ground would result, according to *Teshuvot ha-Rashba*, in a requirement that the wheat be safeguarded against leavening even while yet attached to the ground. See *Teshuvot Maharam Shik*, no. 217.

Nevertheless, many authorities contend that, as long as the wheat remains uncut, *shemirah* is not required either to assure that no leavening has occurred or (according to *Divrei Hayyim* and *Sho'el u-Meshiv*) for purposes of fulfilling the positive obligation unless there exists a cogent reason to suspect that something that might cause leavening may occur. Accordingly, when it is known that there was no rainfall and no sprouting or split kernels are found, no further safeguarding is required. See *Teshuvot Arugat ha-Bosem, Orah Hayyim*, no. 136; R. Mordecai Winkler, *Teshuvot Levushei Mordekhai*, II, no. 152; and R. Shimon Grunfeld, *Teshuvot Maharshag,* I, no. 56. R. Yechiel Michel Rabinowitz, *Teshuvot Galei ha-Yam,* no. 12, comments that, were *shemirah* required even when it is known without doubt that leavening could not have occurred, it would not be possible to sleep or to leave the wheat in an unlocked place for even a short period of time. *Bnei Yissaskhar*, *Hodesh Nisan*, *ma'amar heh*, sec. 20, observes that at the time of the Exodus our ancestors had no advance notice of the commandment to eat *mazah* and hence had no reason to safeguard the wheat at the time of harvesting. He concludes that in Egypt where there was no rain all authorities

completely dry on the stalk as well.[15] A more detailed analysis of *Teshuvot ha-Rashba* will be presented in section IV.

Latter-day authorities realized that it is certainly difficult, and even impossible, to determine the precise moment at which total dryness has occurred. Accordingly, in order to avoid all possibility of *hamez,* R. Shlomoh Ganzfried, *Kizur Shulhan Arukh* 108:1, writes, "It is proper to be meticulous [not to allow] the stalks to remain attached until they have become completely dry and turned white." Earlier, R. Abraham Danzig, *Hayyei Adam* 128:2, declared, "it is proper to cut [the wheat] while it still retains some *yarkut* (green coloring)" rather than delaying until the wheat has become completely white or grey, at which point it is completely dry.[16] *Mishnah Berurah* 453:21 reports that "the practice is to cut wheat for *shemurah* when it is still somewhat moist."[17] *Pri Megadim*, *Eshel Avraham* 435:7, cautions that if the wheat has fully matured it is proper to harvest it immediately.

Despite different nuances of meaning that might be read into the minor variations in the terminology employed by these authorities, it is generally assumed that there is no disagreement among them. These

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would concur that "safeguarding" was not required prior to cutting the wheat. See also *Avnei Nezer, Orah Hayyim,* no. 529. For a comprehensive list of authorities who have voiced an opinion with regard to this issue see *Kezir Hittim*, part 4, note 249.

Sho'el u-Meshiv maintains that "safeguarding" implies not merely that there be no known *hamez* but that there be no possibility of *hamez* and that the absence of *hamez* be known with certainty. Accordingly, he maintains that the requirement of *shimur* excludes reliance upon ordinary principles of presumption such as *rov*. *Minhat Shai* claims that in a meeting with *Sho'el u-Meshiv* the latter predicated his position upon Ramban, *Hullin* 2b. Ramban states that, although doubtful defilement in a public place generally poses no problem, nevertheless, with regard to *terumah*, the *terumah* must be deemed to be impure because the verse "*et mishmeret terumotai* – the safeguarding of my *terumah*s" (Numbers 18:8) requires that *terumah* be safeguarded in an absolute manner and hence preserved from even the possibility of defilement. The identical principle, argued *Sho'el u-Meshiv*, applies with regard to *shimur* of *mazah*. *Minhat Shai* responded that the "safeguarding" of *terumah* and the "safeguarding" of *mazah* are not one and the same, as reflected in the rule that *heseh ha-da'at* ("putting out of mind" or abandonment) disqualifies *terumah* but has no ramification with regard to *mazah*.

[15] See *infra*, note 50 and accompanying text.

[16] R. Abraham Joshua Bick's letter published in *Ha-Eshel be-Ramah*, no. 4 (7 Iyar 5773), p. 26, attempts to resolve the controversy regarding the optimal harvest time by postulating that *Hayyei Adam* and those in agreement with him counseled early harvesting only because, in times gone by, threshing and winnowing were lengthy processes carried out in the field whereas, at present, the entire process is accomplished quickly by employment of a combine. This argument does not address the actual concern of those authorities, *viz.*, that rain may come into contact with fully mature grain before it is harvested.

[17] See also *Mishnah Berurah* 467:17.

authorities advise that the wheat should be harvested "when it is still somewhat moist" or "while it retains some *yarkut*" but not when it is completely green or unripe.

However, premature harvesting of wheat is no less, and perhaps even more, problematic than late harvesting. Accordingly, quite different advice is proffered by another early twentieth-century decisor, R. Yechiel Michel Epstein, *Arukh ha-Shulhan*, *Orah Hayyim* 467:10. *Arukh ha-Shulhan* decries the practice of those who harvest the wheat while it is yet green stating that, in his opinion, it is improper to harvest the grain when it is "*mamash yarok*," i.e., fully green, "because [such kernels of wheat] are difficult to grind and knead and they also have much moisture and more readily become *hamez*;" rather, they should not be cut "until they completely [ripen] and become white."[18] It has also been contended[19] that if wheat kernels are too moist at the time of harvesting moisture may seep out of the kernels causing them to become *hamez* when separated from the ground by soaking in their own moisture.[20] R. Malkiel Zevi Tennenbaum, *Teshuvot Divrei Malki'el,* III, no. 22, states that, even in the absence of perceivable liquid, the moist kernels can become moldy which, in turn, can cause them to become *hamez*. As a practical matter, wheat harvested prematurely is also prone to insect infestation and rotting.

To prevent those problems from occurring, the wheat, if cut too early, must be artificially dried by means of fans. Care must be taken that the fans do not draw outside air that may contain moisture. Dehumidifiers are employed to remove moisture exuded by the kernels. Nevertheless, some writers maintain that the drying process causes moisture to seep from the wheat which, in turn, can cause the kernels to become *hamez*.[21]

The divergent advice of *Hayyei Adam, Kizur Shulhan Arukh* and *Mishnah Berurah* on the one hand and that of *Arukh ha-Shulhan* on the other reflect mutually exclusive choices with regard to mitigation of

[18] A careful reading of *Arukh ha-Shulhan*'s statement indicates that he regards harvesting grain that is "fully *yarok*" as "improper" but he does not regard it to be improper when it is less than "fully *yarok*." Nevertheless, unlike the earlier-cited authorities, in his last clause he recommends delay until the wheat becomes white.

[19] See R. David Rosenberg, letter published in *Ha-Eshel be-Ramah*, no. 4, p. 52, who cites R. Moshe Teitelbaum, better known as the author of *Yismah Mosheh*, *Teshuvot Heshiv Mosheh*, *Orah Hayyim*, no. 18, in support of that view. However, that citation is inappropriate. *Heshiv Mosheh* states only that softening of kernels on the stalk is an indication of *himuz* resulting from rainfall.

[20] See also R. Raphael Zimetbaum, *Or le-Pe'ero*, pp. 65 and 67. *Or le-Pe'ero* maintains that such moisture has the status of actual water rather than of "fruit juice" (*mei peirot*).

[21] See R. Abraham Laufer, *Ha-Eshel be-Ramah*, no. 4, p. 33.

distinct halakhic concerns. The longer wheat remains in the field, the greater is the likelihood that rain may fall after the grain has fully matured, giving rise to the concern that, according to Rashba, the process of leavening may have commenced. In addition, if kernels have ripened, some may actually crack, split or even germinate. Kernels affected in that manner are deemed to be *hamez*.[22] Hence, most authorities recommend early harvesting at a time that ripening is not yet complete.[23] But, if harvesting is too premature, excessive moisture may cause the process of leavening to commence once the kernels are detached from the ground. *Arukh ha-Shulhan*'s recommendation for somewhat delayed harvesting despite the attendant danger of late rainfall is rooted in the consideration that early harvesting is accompanied by the danger posed by excessive moisture in the kernels. It is difficult to satisfy both concerns by harvesting the wheat immediately prior to the time that wheat no longer absorbs moisture from the ground 1) because of uncertainty with regard to precisely when that phenomenon occurs and 2) because not every stalk of wheat in any given field ripens at exactly the same time.

II.

Introduction of the combine has affected the time of harvesting. As its name indicates, that apparatus combines the processes of harvesting, threshing and winnowing. Wheat can no longer be harvested while it is yet green because the combine cannot process kernels containing a relatively high degree of moisture.[24]

Advanced technology has made it possible to measure the moisture content of wheat at any stage of its development. Upon maturation the wheat gradually loses moisture and becomes dry. A device now exists that reliably indicates the percentage of moisture remaining within the

[22] R. Shlomoh Kluger, *Teshuvot ha-Elef Lekha Shlomoh*, no. 306, declares that, if such signs of *hamez* occur in some mature kernels after rainfall, that phenomenon is an indication that the process of *himuz* may have begun in all kernels that have come into contact with the rain. See also *Teshuvot Divrei Hayyim*, *Orah Hayyim*, II, no. 39 and *Kuntres Helev Hittim* (Sivan, 5765), pp. 10-11.

[23] Also, as noted *supra*, note 14, it might be argued that, according to Rashba, if fully mature kernels are allowed to remain unharvested, actual "guarding" of the wheat from the time of maturation in order to attest to absence of rainfall would be required for *mazot* used for fulfilling the obligatory *mizvah* incumbent on the first two evenings of *Pesah*.

[24] See *Kezir Hittim*, Part 6, sec. 6.

kernels. A falling moisture level signifies that maturation has occurred and reveals the precise state of dryness of the kernels at any given time.

General practice in the United States both for *mazot* baked by hand and machine-baked *shmurah mazah* assumes that the optimal degree of dryness for harvesting wheat to be used for baking *mazot* is reached when the moisture content falls within a range of twelve to fourteen percent; some authorities prefer harvesting a bit earlier when the moisture reading is between fourteen and sixteen percent and some prefer a moisture content between sixteen and eighteen percent.[25] Many authorities regard a higher concentration of liquid as unacceptable, while further delay in order to allow for loss of even more moisture increases the danger of leavening as a result of contact with rain.

In recent years, a controversy has arisen between those who follow the long-established practice of this country and those who have come to insist upon earlier harvesting, generally at a time when the moisture content is measured at between sixteen and eighteen percent. Those seeking to maintain the established practice repeatedly describe it as a practice quasi-hallowed over a period of time in excess of sixty years. They strongly insist that harvesting at an earlier time leads to serious problems of the nature that has been described earlier.[26]

Other authorities[27] strongly insist that wheat kernels are fully mature when their moisture content falls to between twenty-five and thirty-five percent[28] and, therefore, according to Rashba, any subsequent rainfall can lead to the kernels becoming *hamez*. Hence, they are concerned that if harvesting is delayed 1) at least some stalks may have completely matured which gives rise to concern that, according to Rashba, rainfall may cause leavening to commence and 2) in addition, some kernels may have already sprouted and hence perforce it becomes necessary to rely upon nullification[29] of those

[25] See the numerous letters published in *Ha-Eshel be-Ramah*, no. 4.

[26] Exposition of that position is the primary focus of R. Abraham Laufer's two-volume work *Ha-Eshel be-Ramah* and the subsequent pamphlets bearing that title.

[27] See the comprehensive and erudite work of R. Ya'akov Zevi Goldstein, *Kezir Hittim* (Brooklyn, 5765). Cf., the rebuttal of R. Yitzchak Stein, *Et Kezir Hittim* (Brooklyn, 5765) as well as R. Joel Rosenberg, *Helev Hittim Yasbi'ekh.*

[28] See *Kezir Hittim*, Part 6, sec. 5. In his *Likkut mi-Pi Sefarim ve-Soferim*, chap. 1, sec. 43, the same author estimates full maturity as occurring when moisture content is reduced to thirty percent.

[29] There is a controversy among early-day authorities with regard to whether *hamez* nullified before *Pesah* in a quantity of other foodstuffs sixty times as great is permissible on *Pesah. Shulhan Arukh*, *Orah Hayyim* 447:4, rules permissively but adds that "some forbid" consumption of the mixture of *Pesah.* Rema, *ad locum*, prohibits any admixture of dry *hamez* but states that the practice is to permit liquid *hamez* that has

kernels in the process of grinding them into flour.[30] Those authorities contend that the earlier described concerns can be completely overcome in our technologically advanced times by use of fans and dehumidifiers for indoor drying.[31] Since those authorities require that the wheat be cut while the moisture content is yet quite high, the wheat must be harvested by hand rather than by means of a combine. Some individuals prefer to harvest by hand also because of a concern that wheat for fulfilling the *mizvah* on the first two nights of *Pesah* be cut *le-shem mizvat mazah*, i.e., for the express purpose of use in fulfilling the *mizvah*, an act that arguably cannot be performed by machine.[32]

The practice in Israel is quite different. In the Middle East there is extremely little, if any, precipitation during the summer months. Hence, in Israel, since the likelihood of rainfall and its attendant halakhic implications can safely be ignored,[33] the universal practice is to delay harvesting wheat for *mazot* until it is established beyond cavil that the kernels are completely dry.

Those climatic conditions are also present in certain areas of the United Sates. In recent years,[34] some scholars sought to emulate the Israeli practice by acquiring wheat for baking *mazot* in certain western areas

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been nullified before *Pesah*. Wheat kernels are not a liquid and hence it would seem that, according to Rema, kernels that have sprouted and have been mixed with other kernels are not nullified even before *Pesah*. However, many authorities maintain that flour has the halakhic status of a liquid and hence, if the mixture of kernels is milled before *Pesah*, the principle of nullification applies. See *Mishnah Berurah* 453:17.

Nevertheless, as noted by *Sha'ar ha-Ziyyun* 453:25, yet others regard flour as a dry solid rather than a liquid. For a comprehensive discussion and citation of all relevant sources regarding this issue see *Encyclopedia Talmudit*, XII (Jerusalem, 5730), 36-41.

[30] See *infra*, note 33.

[31] See *Kezir Hittim*, Part 6, sec. 5.

[32] See *Kezir Hittim*, Part 6, sec. 11.

[33] In Europe, the *Brisker Rav* insisted upon painstaking inspection of each kernel of wheat used in the baking of his *mazot* because of a fear that a small number of kernels might have germinated, split or developed cracks and he was unwilling to rely upon pre-*Pesah* nullification of the flour derived from those kernels in the vastly larger quantities of flour obtained from fully acceptable kernels. Upon settling in Israel and becoming aware that problematic kernels were rarely found in that country, the *Brisker Rav* abandoned that stringency. See *Haggadah shel Pesah mi-Bet Levi*, 2nd ed., p. 15. Cf., *Ha-Eshel be-Ramah*, no. 3, 2nd ed., p. 100, note 4.

[34] A similar attempt was made many years ago in 1966, reportedly at the behest of the late *Satmar Rav*, R. Joel Teitelbaum, but failed because the wheat proved to be unsuitable for baking *mazot*. See *Ha-Eshel be-Ramah*, no. 3, 2nd ed., p. 100, note 5 and *Kovez Birurei Hittim*, unnumbered pages following p. 81, sec. 5 and p. 82. Durum wheat used for producing pasta is normally grown in those areas. At present, a variety of soft white wheat is specially grown in Arizona for use in baking *mazah*.

in which there is no rainfall during the summer months.[35] Implementation of that plan brought in its wake vociferous condemnation from some quarters.[36] The controversy seems to be focused upon various aspects of the execution of the enterprise rather than upon its halakhic underpinning. Issues of whether the wheat is actually allowed to ripen fully, whether there is indeed no rainfall in the identified locale or whether the wheat becomes otherwise contaminated by exposure to water, are questions of fact rather than of Halakhah. As such, they are beyond both the scope and ken of this writer. Moreover, even if such conditions did exist in the past, they can readily be rectified for the future.

III.

There is, however, at least in theory, one possible problem attendant upon late harvesting. Late harvesting in an arid climate presents no problem insofar as rainfall is concerned. However, as recorded by *Shulhan Arukh, Orah Hayyim* 466:5 on the basis of the Palestinian Talmud, *Pesahim* 3:1, contact with dew causes the leavening process to occur. The Gemara, *Ta'anit* 3a, seemingly states that, unlike rain, dew is ubiquitous.[37] Nevertheless, no early-day authority expresses concern regarding the presence of dew upon kernels

[35] *Kovez Birurei Hittim* is devoted to a halakhic analysis of that enterprise. A detailed description of the development of the project and its advantages was authored by R. Ben-Zion Woszner of Monsey, a son of the author of *Teshuvot Shevet ha-Levi*, R. Samuel ha-Levi Woszner of Bnei Brak. The untitled material, presented in the form of loose pages, was widely distributed in synagogues and conventicles in certain communities.

[36] See *Ha-Eshel be-Remah*, nos. 2 and 3 and no. 4 (7 Iyar 5773), pp 56-64.

[37] R. Ya'akov Yitzchak Neuman, *Kovez Birurei Hittim,* p. 47, suggests that the Gemara's statement regarding dew may be limited to the Land of Israel. Rabbi Zevi Brody, *Kovez Birurei Hittim*, pp. 60-62, takes note of Rashi's comment that dew is guaranteed because otherwise there would be no vegetation and the world could not exist. Hence, there is no reason to presume that dew is provided in a desert where crops do not grow naturally. It should also be noted that *Midrash Aggadah*, ed. Salomon Buber, Genesis 13:10, declares that Egypt receives neither rain nor dew but is irrigated by the waters of the Nile that overflow its banks. In our age, artificial irrigation is employed in arid areas. Rabbi Brody also points out that there is no hint in the Gemara's statement that dew is available on a daily basis. Even in the arid areas in which wheat is grown dew is indeed present earlier in the year. He further draws attention to a statement of the Palestinian Talmud, *Berakhot* 5:2, indicating that the assurance of dew is a blessing conferred upon the progeny of Abraham. *Yefeh Mareh*, *ad locum*, explains that the connotation of the verse "May the Lord give you of the dew of the heavens" (Genesis 27:28) is that Isaac bestowed that blessing upon Jacob. If so, there is no reason to presume that dew is always available to non-Jews.

of fully matured wheat. *Piskei ha-Tosafot, Menahot*, no. 208, does declare that "*anshei ma'aseh*," i.e., scrupulous individuals, cut the wheat only when the sun shines, i.e., only after the sun has already burned off the dew that condenses upon the wheat during the night. R. Moshe Schik, *Teshuvot Maharam Shik, Orah Hayyim,* no. 217; *Da'at Torah*, *Orah Hayyim* 467:4; and *Ma'adanei Shmu'el* 108:5 advise that wheat for *mazot* be harvested only after mid-day.[38] The presumption seems to be that the miniscule amount of moisture present in the form of dew becomes a problem only if natural evaporation does not occur with the result that, if cut while yet wet, the kernels of wheat are in effect allowed to soak in dew subsequent to having been cut.[39] Thus, it would appear that the presence of dew should not give rise to a problem with regard to late harvesting.

However, R. Mordecai Bermi, *Ma'amar Mordekhai* 467:7, adds the comment that the small amount of dew present on the wheat cannot cause the leavening process to commence in an unopened, hard kernel covered by chaff, particularly because it "flows off" (*agav madleihu*) the kernels, whereas leavening is likely to commence if dew comes into contact with flour.[40] R. Meir Zevi Witmeir, *Teshuvot Ramaz, Orah Hayyim*, no. 37, sec. 6, notes that, in his seminal responsum concerning fully ripened wheat, Rashba expresses concern only with regard to the effect of rain but not with regard to dew.

In the course of inspecting wheat about to be harvested in an arid area, Rabbi Zevi Brody reports that he noticed that, due to their

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More fundamentally, the author of *Or ha-Hayyim*, in his commentary on *Ta'anit*, *Rishon le-Zion*, *loc. cit*., points out that the Gemara states only that prayer for dew is superfluous because, unlike rain, dew is unfailingly provided in the necessary quantity. The implication is that, were dew not essential for growing a crop, there is no reason to assume that it would be supplied.

[38] See also *Kezir Hittim*, Part 5, sec. 10. Presumably, the reason that wheat should not be harvested in the morning hours is simply because several hours of the sun's heat are necessary in order to assure that all dew has evaporated. However, R. Yachya Zalih, *Teshuvot Pe'ulat Zaddik*, I, no. 171, suggests that the reason is because only the eastern side of the kernel is exposed to the sun during the morning hours whereas by mid-day the sun's rays warm the western side as well. Nevertheless, some contemporary authorities permit harvesting the wheat two hours before noon. See *Kezirat ha-Hittim u-Beriratam*, 2nd ed. (5766), p. 48. *Kezir Hittim*, Part 5, sec. 9 and Part 8, sec. 7, cites a letter of R. Sholom Ber Schneersohn stating that the wheat should remain in the field "only until the third [astronomical hour] or, at most, the fourth."

[39] See *Teshuvot Maharam Shik*, *Orah Hayyim*, no. 217. See also *Sedei Hemed, ma'arekhet hamez u-mazah,* no. 10, sec. 13. Cf., however, *Teshuvot Shem Aryeh,* addenda, no. 11, who suggests that dew can cause fully ripened kernels to become *hamez* while still on the stalk. See also R. Malkiel Zevi Tennenbaum, *Teshuvot Divrei Malki'el,* III, no. 20; *Teshuvot Shem Aryeh,* no. 11; and *Teshuvot Arugat ha-Bosem, Orah Hayyim*, no. 130.

[40] See also *Mishnah Berurah* 467:18.

advanced state of dryness, some kernels were no longer fully encased by chaff. *Ma'amar Mordekhai* seems to be unconcerned with the presence of dew only because the minute quantity that appears on the wheat cannot penetrate the outer covering of the kernel before evaporating from the surface of the wheat. However, dew might well come into contact with a kernel that is partially open. That concern was readily dispelled by conclusive evidence establishing that no dew whatsoever appears in those areas during the growing season.[41]

Dew is the product of moisture that enters the atmosphere through the process of evaporation caused by heat. Excess moisture that does not dissipate remains suspended in the air and is perceived in the form of humidity. When the temperature drops below a certain level the moisture cannot be retained in the air and is released as dew. The presence of dew is dependent upon two factors: 1) daytime temperature of a level sufficient to cause excessive moisture to be present in the air during the heat of day and 2) night temperatures that fall to the point that the air can no longer retain such moisture. The temperature to which the thermometer must fall for release of dew to the atmosphere to occur is known as the Dew Point. The Dew Point varies with the quantity of excess moisture present in the air which, in turn, depends upon the degree and duration of heat during the day. Information with regard to dew is of significant value to farmers for agricultural reasons. Government agencies prepare tables that report temperature, humidity and the Dew Point on an hourly basis in the areas of interest. That information, which is a matter of public record freely available to all, is retained and readily available on the internet. Examination of those records for a number of years reveals that the temperature in the areas of interest did not drop to the Dew Point on any date that might be of concern to persons acquiring wheat for *mazah* baking.

Two further objections were raised with regard to use of wheat grown in Western states: 1) The gluten content is higher than that of strains of wheat normally used for baking *mazot* and the heightened gluten content may cause fermentation to occur at an accelerated speed. 2) Due to lack of rainfall it is necessary to irrigate the fields in order to produce wheat. The water used for irrigation, it has been alleged, is salt water and can cause fermentation to be accelerated.

In rebuttal it is contended that there is no halakhic source indicating a correlation between gluten levels and leavening. In point of fact, gluten content varies from field to field and from year to year as well as with the

[41] See *Kovez Birurei Hittim*, pp. 57-60.

particular strain of wheat. It has also been contended that the degree of gluten content is more closely related to the type and quantity of fertilizer used rather than to the particular strain of wheat or other factors.

Moreover, if there is any relationship between gluten content and rate of fermentation it is inverse, i.e., the *lower* the gluten the sooner the dough will become *hamez*. The Mishnah, *Pesahim* 35a, includes barley, spelt and oats among the grains acceptable for baking *mazot*. Those grains are low in gluten content and, accordingly, may be freely consumed by individuals who must adhere to a gluten-free diet. The Gemara, *Pesahim* 40a, followed by Rambam, *Hilkhot Hamez u-Mazah* 5:6-7, declares that barley becomes *hamez* more readily than wheat because barley dough is "looser" than the dough produced by "hard" wheat.[42] It is the gluten (derived from the word "glue") content that serves to bind the dough in a firm mass.[43]

Shulhan Arukh, *Orah Hayyim* 455:5, does indeed rule that salt should not be added to dough in the course of kneading. The author of *Ben Ish Hai* in his *Teshuvot Rav Pe'alim*, IV, no. 18, rules that, similarly, water used for baking *mazot* should not be drawn from wells containing "salty

[42] R. Yitzchak Ya'akov Weisz, *Teshuvot Minhat Yizhak*, IX, no. 49, rules against baking *mazah* from oats. *Minhat Yizhak* contends that we have a firm tradition with regard to the manner and time limit for the processing of wheat but that we have no such tradition with regard to procedures to be followed when employing barley. *Magen Avraham*, *Orah Hayyim* 453: 70, rules that, for halakhic purposes, rye (*shipon*) is a species of barley. *Pithei Olam* in his commentary on *Magen Avraham*, *ad loc*., notes that oats (*shibbolet shu'al*) are similarly a species of barley. Accordingly, *Minhat Yizhak* advises against relying upon any possible leniency in this matter. In context, his position with regard to use of spelt (*kosmin*), which is described by the Gemara (*Pesahim* 35a; see Isaiah 28:25) as a form of wheat, is ambiguous.

R. Moshe Uri Linder, *Mazot Mizvah*, 2nd ed. (Jerusalem, 5753), 1:10, note 18, inaccurately reports that *Minhat Yizhak* advised that persons suffering from gluten intolerance who wish to use *mazot* made of one of the species of barley be exceedingly careful not to allow even momentary pauses in the kneading and rolling of the dough and that they eat *mazah* only on the first evenings of *Pesah*, limiting themselves to a quantity of *mazah* equivalent to a *zayit*. Rabbi Linder himself advises use of spelt rather than of other grains. See also R. Yitzchak Stein, *Kezirat ha-Hittim u-Beriratam*, 2nd ed. (5766), pp. 49-55.

It should be noted, however, that Rema, *Orah Hayyim* 453:1, states only that "it is the custom to prefer taking wheat." See *Mishnah Berurah* 453:2. *Maharam Shik al ha-Mizvot*, no. 10, sec. 1, reports that *Hatam Sofer* gave as the rationale for not using barley the consideration that the *mizvah* of *mazah* is remembrance of the Exodus whereas barley causes forgetfulness. See R. Shalom Mordecai Schwadron, *Da'at Torah, Orah Hayyim* 453:1 as well as in his glosses to *Orhot Hayyim* of R. Nachman Kahana of Spinka, *Orah Hayyim,* 453:1, cites sources indicating that barley is softer than wheat and hence become *hamez* more readily.

[43] See *Kovez Birurei Hittim*, unnumbered pages following p. 84, sec. 4 and p. 85.

water." That ruling was disputed by R. Moshe Kalfon, *Teshuvot Sho'el ve-Nish'al*, II, no. 30. However, that controversy is irrelevant to the issue under discussion because, in actuality, the source of the water used for irrigation is the Colorado river that is fed by the runoff of rain and snow that flows from mountains and streams. Needless to say, the river water is not "salty."[44]

The actual issue is somewhat different. The sodium content of wheat grown in the area in question is approximately 26mg. per 100g., whereas the sodium content of wheat grown in New York State is far lower, *viz.*, 3mg. per 100g. The reason for the high sodium content is that in arid climates salts accumulate in the soil because of high evapotranspiration. When water evaporates the salts remain behind. In addition, leaching of the salt in the soil normally occurs as a result of rainfall. Lack of rainfall prevents leaching. Moreover, although the water of the Colorado river is not salty to the taste, its salinity at 1.2dS/m (about 700ppm.) is relatively high. In order to enhance crop yield the concentration of salt in the soil must be reduced. Chemicals, including gypsum (calcium sulfate and sulfate) and sulfuric acid, are applied to release sodium from the soil so that it may be leached.

The issue, then, is the elevated salt content of the wheat. One searches the responsa literature in vain for any indication that the sodium content of wheat must be monitored in choosing wheat for the baking of *mazot*. R. Moshe Sofer, *Teshuvot Hatam Sofer*, *Orah Hayyim*, no. 123, explains that salt may not be added to *mazah* dough for two reasons: 1) Fruit juice (*mei peirot*) may not be mixed with water in kneading the dough because the combination accelerates the speed at which the dough becomes *hamez*. All liquids other than water and all soluble substances are categorized as *mei peirot* for this purpose. 2) For purposes of transmitting or absorbing "taste," the effect of salt is regarded as comparable to the effect of raising the temperature of a foodstuff in the process of cooking. *Shulhan Arukh*, *Orah Hayyim* 455:3, rules that warm water (*poshrim*) may not be used in kneading dough for baking *mazot* because the higher temperature may cause the dough to become *hamez*. Salt, it is presumed, has the same effect. Those considerations are relevant with regard to admixture of salt in *mazah* dough; however, they are not germane with regard to the natural sodium content of the wheat used for flour.[45]

[44] *Loc. cit.*

[45] One anonymous writer presents a fanciful argument in claiming that the high winds of the Arizona desert separate the chaff from the wheat, causing the kernels to become exposed. Those winds, he contends, sweep salt from the ground and cause

IV.

Teshuvot ha-Rashba speaks of the possibility of the process of *himuz* beginning on the stalk from the time that the kernels "have completely matured (*she-nitbashlu le-gamri*) and "do not at all any longer require drawing [nutrients] (*ve-einah zerikhah kelal le-yenikah*)." Other early-day authorities use similar nomenclature. The stage of maturation to which Rashba refers is the subject of extensive discussion and is the focal point of the current dispute.

In the process of growth and maturation the wheat kernels absorb moisture and nutrients until they reach maximum growth potential. At that point, the developmental process shuts down and the kernels lose moisture, lose color, shrivel, harden and become totally dry. The kernels must be allowed to become extremely dry, either on the stalk or by drying in the sun, before they can be threshed and ground into flour. *Avnei Nezer*, *Orah Hayyim*, no. 529 and R. Abraham Borenstein, *Eglei Tal*, *Melekhet Kozer* 22:4, as well as a host of other latter-day authorities, understand Rashba as referring to the precise point at which the wheat is "suitable for harvesting (*omedet likazer*)" since the drying process, which may require a period of days, or even weeks, can readily continue after harvesting. One writer describes the kernels that have reached that stage as "blown-up," without shrinkage or shriveling, moist but lacking perceivable dampness. At that stage, we are told, the kernels have completely lost green pigmentation but the protective sheath surrounding the kernel can be peeled away without crumbling into small pieces.[46]

As noted earlier, at present there are implements that make it possible to measure the moisture content of wheat kernels with a great deal of precision. Rabbi Ya'akov Zevi Goldstein estimates that full maturity as defined by the above-listed criteria is reached when the moisture content reaches approximately thirty percent. The author of *Kovez Birurei Hittim* posits the moisture content at that stage to be somewhat lower, twenty-eight percent.[47] A drop of moisture percentage to that level is indicative

particles of salt to adhere to the exposed kernels. See *Birurei Devarim be-Inyan Hittei Arizona*, p. 16. I am in possession of a letter from Rabbi Yitzchak Ya'akov Chaim, dated Av, 5773, attesting to the fact that a number of rabbinic authorities made a point of tasting a sampling of such kernels and found no trace of salt whatsoever.

[46] See R. Ya'akov Zevi Goldstein, *Likkut mi-Pi Sefarim ve-Soferim*, sec. 33, s.v. *ve-ha-yoze*.

[47] The numbers signifying moisture content are certainly not an absolute criterion of maturity. The moisture percentage rises and falls at every stage of growth, in part as a result of moisture absorbed from the atmosphere at night when it is relatively

of physiological maturity beyond which no further growth or development will occur. From that moment on, according to a literal reading of Rashba, the process of fermentation may commence.[48] That analysis is reflected in the statements of *Hayyei Adam* 128:2 that the wheat should be harvested while there is still "a bit of green coloring" and 128:30 "while they are yet somewhat moist."

Other contemporary writers whose opinions are collected and published in *Ha-Eshel be-Ramah*, no. 4, insist that Rashba is describing a later stage in the maturation process. They contend that the kernels are not deemed fully developed until their moisture content drops to approximately fourteen percent or as low as twelve percent.[49] They argue, in effect, that maturation is not deemed to have occurred until the kernels can be properly ground into flour without further drying. Since that occurs late in the growing season, they maintain that there is no need to be concerned about the effect of rain upon mature kernels, even according to Rashba, until the moisture content has dropped to that lower level.

The crucial problem, of course, is identification of the stage of development to which Rashba refers. Rashba implies that the process of *himuz*, or leavening, cannot take place so long as the kernel continues to mature. The effect of water upon the kernel is somewhat paradoxical: until maturation of the kernel, water causes it to grow and develop; once maturation is complete, water does not cause further growth but enables the process of *himuz* to commence.[50]

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cool and because of surrender of moisture due to heat during the day. Moreover, the numbers represent the average moisture content in the sample that is measured. The moisture of individual kernels may be higher or lower.

[48] Some writers indicate that Rashba is referring to an even earlier stage of the maturation process. The wheat kernels reach a saturation point and then slowly begin to lose moisture. According to those authorities, Rashba asserts that *himuz* may occur from the moment that the kernels cease further growth before they begin to lose moisture. See *Kezir Hittim*, Part 1, sec. 14, Part 2, note 2 and Part 4, note 208.

[49] In formulating their position, these writers focus upon Rashba's concluding phrase, "all that has dried completely (*she-nityabesh le-gamri*) while yet attached is comparable to if it were lying in a container" and hence may become *hamez* if rain falls upon the kernels. The phrase "*she-nityabesh le-gamri*" is not present in the writings of numerous early-day authors who follow Rashba's position.

[50] See R. Chaim Halberstam, *Teshvot Divrei Hayyim*, *Orah Hayyim*, II, no. 39. *Divrei Hayyim* adds the remarkable comment that even if the kernel "sprouts at the side (*nizmah le-zeddadim*)" during maturation it is not deemed to be *hamez*. *Me'il Zedakah*, no. 69, disagrees with *Teshuvot ha-Rashba* with regard to that point as well. *Me'il Zedakah* maintains that, although, in general, there is no reason to suspect that contact with water used during the maturation process causes *himuz*, any observable sign of possible *himuz* renders the kernel impermissible even if the kernel has not yet fully developed. Similarly, according to *Me'il Zedakah*, torrential rainfall that forces

Growth of a wheat kernel progresses in various distinct stages over a period of approximately four weeks: 1) the watery ripe stage, in which the kernel is filled with a clear liquid but contains very little dry matter: 2) the milk stage, in which the liquid turns a into white, milk-like fluid; 3) the soft dough stage, during which material pressed out of the kernel is no longer a liquid but acquires the consistency of meal or dough; 4) the hard dough stage, at which point the moisture content is sharply reduced and the kernel acquires the consistency of hard dough. Little green coloring remains in the plant. The kernel reaches physiological maturity at the end of this stage; 5) the hard kernel stage at which point the plant has become completely yellow and the kernel becomes hard to the touch. However, at this stage, if the kernel is dented with a thumbnail a mark will remain; 6) the harvest ripe stage at which point the kernel is extremely dry and brittle and can be harvested with a combine. The kernel can no longer be crushed with a thumbnail and, if crushed by other means, the kernel will fragment.

Generally, threshing and milling the kernels into flour is not attempted until the wheat is completely dry. The wheat can either be allowed to dry on the stalk, be harvested and dried in the sun or dried artificially by using a fan. In days gone by, wheat, particularly when intended for *mazot*, was readily harvested before it became completely dry and thereafter allowed to dry in the sun. Use of combines for harvesting and threshing requires that the wheat be allowed to dry while attached to the ground until moisture content drops to no more than twenty percent.[51] Use of combines, it is contended, gave rise to the American practice of harvesting wheat for baking *mazot* at a somewhat later stage of development than recommended by *Hayyei Adam* and *Mishnah Berurah*.

The wheat kernel reaches physiological maturity at the close of the fourth stage and no further growth or qualitative development occurs. At that stage the moisture content of the kernel is between 25-35%.[52] In the later stages the kernels surrender moisture and the entire plant changes color from green to golden yellow.

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the stalks to the ground and causes the kernels to soak in the accumulated water also gives rise to a concern for *himuz* even during the process of maturation. See *Avnei Nezer*, *Orah Hayyim*, no. 529, sec. 12 and R. Zevi Hirsch Orenstein, *Teshuvot Birkat Rezeh*, no. 77. See *supra*, note 7.

[51] See *Kuntres Helev Hittim* (Sivan 5765), p. 9.

[52] *Helev Hittim*, p. 8. E. L. Deckard, *Physiological Maturity in Wheat* (2005), pp. 1-17, states that moisture content at physiological maturity ranges from 20% to 40%. Another publication reproduced in *Or Yisra'el*, no. 43 (Nisan 5766), p. 68, gives the moisture content as 30%.

There remains, however, some ambiguity with regard to Rashba's position with regard to when *himuz* can occur. Rashba writes that *himuz* can occur when the wheat "is fully ripened while attached [to the ground] and no longer requires drawing (nutrients) at all; whatever is completely dried out [even] while attached is comparable to having been placed in a vessel and accepts *himuz* if rain falls upon it."[53]

The discrepancy between the two clauses of that sentence is quite apparent. In the first clause Rashba posits two criteria, *viz.*, that the kernels have 1) become fully mature and 2) that they no longer absorb nutrients. In the second clause Rashba substitutes the term "fully dry" (*she-nityabesh le-gamri*), [54] for the earlier employed phrase "fully mature" (*she-nitbashel le-gamri*). In formulating a second clause, Rashba either intended to add a third criterion, *viz.*, "fully dry" and thereby incongruously rendered the first two clauses redundant[55] or intended the term "fully dry (*she-nityabesh le-gamri*)" to be less than literal and to serve simply as a denotation of the stage of dryness present when the first two criteria are manifested. [56]

The ambiguity in elucidation of Rashba's position is complicated by the fact that the various early-day authorities who accept Rashba's position omit any reference to *nityabesh le-gamri* and speak only of *nitbashel*

[53] The text reads: "שנתבשל לגמרי במחובר ואינה צריכה כלל ליניקה וכל שנתיבש לגמרי במחובר כמאן דמנחא בכדא דמיא ומקבלת חימוץ אם ירדו עליה גשמים."

[54] R. Meir Witmeir, *Teshuvot Ramaz,* 1, *Orah Hayyim,* no. 37, sec. 5, suggests that the word *she-nityabesh* is a typographical error and should read *she-nitbashel.*

[55] Cf., R. Joseph Saul Nathanson's responsum published in *Yevakesh Razon* on *Midrash Shoher Tov* which describes *Shulhan Arukh*'s language as connoting "dry as wood." Cf., however, Rabbi Nathanson's *Divrei Sha'ul*, *Edut le-Yosef*, *Likkutim*, p. 45b. It has been suggested Rabbi Nathanson's comment in *Yevakesh Razon* is intended to apply only to the stage at which wheat is subject to defilement rather than at the stage at which it is susceptible to *himuz.*

R. Yom Tov Krispen, *Teshuvot Bigdei Yom Tov*, *Yoreh De'ah*, no. 43, understands Rashba in an entirely different manner. *Bigdei Yom Tov* asserts that until the wheat is *nityabesh le-gamri* the wheat continues to draw nutrients from the soil. Thus Rashba's second clause is a declaration that the first two criteria are not satisfied until the wheat is completely dry. That interpretation is simply contrafactual. Cf., R. Yitzchak Stein, *Et Kezir Hittim* (Brooklyn, 5765), who apparently does not realize that moisture is retained even when additional nutrients and water are no longer absorbed and that residual moisture is surrendered in the drying process.

[56] Rashba is interpreted in that manner by *Teshvuot Ramaz*, I, *Orah Hayyim*, no. 37, who comments that "completely dry" indicates the state of dryness reached upon full maturity at which time nutrients are not longer absorbed. See also *Kezir Hittim*, pp. 32-34.

le-gamri.[57] On the other hand, *Shulhan Arukh*, *Orah Hayyim* 467:5, and *Levush, Orah Hayyim* 467:5, do employ the phrase "*nityabesh le-gamri*."[58]

Hazon Ish, *Yoreh De'ah* 197:1, offers a novel, but probably more empirically accurate, interpretation of Rashba. *Hazon Ish* identifies two distinct stages associated with full maturity: 1) A point at which the kernel is fully developed and requires no further nutrients, i.e., physiological maturity, but at which attachment to the root still causes plant metabolism to continue, albeit such metabolism represents neither benefit nor harm to the kernel. 2) A second stage at which attachment to the roots is of no effect whatsoever. Rashba's reference to *nitbashel le-gamri*, opines *Hazon Ish*, is to the dryness that occurs subsequent to the end of maturation but not to dryness that occurs upon total severance of physiological attachment to the root. It would seem that, according to *Hazon Ish,* concern for possible *himuz* because of rain begins at some point between physiological maturation as is the opinion of Rabbi Goldstein and the point at which the kernel begins to shrink, i.e. right before the twelve to fourteen percent moisture level posited by other authorities.

Even assuming that Rashba regards rainfall to be a problem only when the wheat is *nityabesh le-gamri*, rainfall even much earlier in the growth process presents a problem for the many early-day authorities who do not posit that criterion.

V.

The present-day controversies are limited to the optimal care that should be taken in order to avoid even a possibility of *hamez*. The disagreements regarding the time of harvesting arise from a concern to comply with the view of Rashba as cited by *Shulhan Arukh*. Accepting Rashba's position, there is controversy both with regard to the juncture in the maturation process at which the wheat is deemed to become susceptible to fermentation and with regard to the nature and amount of precipitation that is problematic even for Rashba.

Shulhan Arukh, *Orah Hayyim* 453:4, rules, "It is proper to safeguard [kernels of] wheat from which *mazot* are made for the purpose of fulfilling the *mizvah* from the time of cutting so that water does not fall upon

[57] See the list of citations provided by R. Ya'akov Zevi Goldstein, *Likkut mi-Pi Sefarim ve-Soferim*, sec. 2.

[58] See also *Teshuvot Divrei Hayyim*, *Orah Hayyim*, II, no. 39; *Olat Shabbat* 453:4; and *Shulhan Arukh ha-Rav*, *Orah Hayyim* 467:12

them or, at the minimum, from the time of milling; but in case of need it is permissible to take flour from the marketplace." The commentaries on *Shulhan Arukh* note that ordinary commercial flour may be used only in locales in which it is not the practice to temper the kernels with water before grinding is commenced.[59] Absent that concern, *Shulhan Arukh* rules that the requirement for safeguarding the kernels for purposes of fulfillment of the *mizvah* is satisfied if vigilance is exercised from the time of kneading the dough and onward provided that there is no particular reason to fear that the kernels have become *hamez* at an earlier time through contact with water.

The established practices in this country surrounding the harvesting of wheat for baking *mazot* are grounded in authoritative halakhic sources. Those who counsel early harvesting of wheat or use of wheat grown in Arizona advocate for acceptance of their proposals as optimal in order to avoid any possibility of *hamez* rather than as a normative requirement.

Meticulousness in avoiding the slightest possibility of consuming even a particle of *hamez* or of any food product regarding which there is the remotest possibility of an admixture of *hamez* coupled with scrupulousness far beyond the demands of halakhic canons have always been emblematic of a Jew's commitment to *mizvot*. Jewish lore is replete with stringencies practiced by scholars and saints of previous generations. The bases for such stringencies are not difficult to discern.

The *Zohar*, *Parashat Tezaveh* 183b, refers to *mazah* as a vehicle for acquiring "*raza de-meheimenuta* — the secret of faith." The *mizvah* itself reflects belief in divine guidance of human history and God's providential guardianship of the Jewish people. The *Zohar* teaches that when our ancestors escaped from Egypt they did not appreciate the secret of faith. God decreed that they not partake of other food until they ate *mazah*. The healing power of *mazah* inculcated them with faith and made it possible for them to eat all other food without subsequent harm. The minutiae of halakhic distinctions between *hamez* and non-*hamez* are no less metaphysical than physical. Every act designed to prevent *hamez* from occurring is an expression of fidelity to the divine nature of Halakhah.

No wonder, then, that the Ari, as cited by *Be'er Heitev*, *Orah Hayyim* 447:1, declared that a person who succeeds in avoiding even the smallest particle of *hamez* during the entire period of *Pesah* may be assured that he will not transgress throughout the entire year. There is nothing mystical

[59] See, for example, *Magen Avraham* 453:8. Cf., however, the view of R. Elijah of Vilna as cited by *Hayyei Adam* 128:90; *Bi'ur Halakhah* 453:4; and *Ma'aseh Rav*, no. 186. See the note appended to that section of *Ma'aseh Rav ha-Shalem*, ed. R. Mordecai Zelushinsky (Jerusalem, 5747), p. 210.

or mysterious in that statement. Devotion to *mizvot* and trepidation of possible transgression that enable a person to avoid all of the myriad possibilities of inadvertent violation in this area are indicative of character traits that preclude remiss conduct in other areas as well.

And, finally, for reasons deeply ingrained in the psyche of a Jew, partaking of *mazah* is among the most cherished of *mizvot*. R. Moshe Sofer, *Teshuvot Hatam Sofer*, *Hoshen Mishpat*, no. 196, most eloquently expresses the deeply-rooted zeal of a Jew for optimal fulfillment of this *mizvah*: "The positive commandment regarding consuming safeguarded *mazah* on the evening of *Pesah* is the sole *mizvah* of the Torah concerning eating that remains to us. We have neither the paschal offering, nor sacrifices, nor *terumah*, nor *ma'aser sheni*; we have only one *mizvah* [of eating] from year to year." Heaven forfend, adds *Hatam Sofer*, that we tarnish the beauty of this *mizvah*!