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Bais Horach

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## Bracha on Hydroponic Vegetables

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## WHAT IS THE CORRECT BRACHA TO MAKE ON VEGETABLES THAT ARE GROWN HYDROPONICALLY?

In recent years it has become more popular to grow fruits and vegetables hydroponically on vertical farms. Vertical farming is the practice of growing crops in vertically stacked layers. It often incorporates controlled-environment agriculture, which aims to optimize plant growth and soilless farming techniques (Wikipedia). The advantage for a farmer to grow his produce in this manner is that it allows for year-round food production in any climate. There is also a potential advantage for the kosher consumer, as it is possible to prevent insects from accessing leafy vegetables that are often infested with bugs. This is easier said than done, as the room that the produce is growing in must be properly sealed and contain proper filtration. The produce is then grown in water rather than soil (which often contains insects and insect eggs). Soil, as a growing medium, is replaced by coconut coir (fibrous husks of coconut), rockwool, peat moss, or perlite. A word of caution: If you are growing a leafy vegetable or herb hydroponically in your own home or purchasing it from a store, you cannot assume that it is bug free without properly checking it for insects. Only if it is purchased with a reliable hechsher, then it could be eaten without checking.

The shailah is: What bracha should be recited on lettuce or any other vegetable that is hydroponically grown? Ordinarily, one recites a "borei pri ha'adama"-He creates the fruit of the ground – when eating vegetables that grow from the ground. However, when vegetables are hydroponically grown, they are not growing from the ground<sup>1</sup> in which case, perhaps it may not be appropriate to recite "borei pri ha'adama".

The Yerushalmi (Kilayim 7:6) quotes Reb Yossi who questions whether one should recite "hamotzi" on bread made from wheat grown in a non-perforated flowerpot. The bracha of "hamotzi" praises HaShem Who is "motzi lechem min ha'aretz" - brings bread forth from the earth. The Yerushalmi is unsure whether grain grown in a non-perforated flowerpot is classified as gidulei aretz. The Yerushalmi leaves the question unresolved. Therefore, the Chayei Adam (Klal 51:17) rules that one should recite a "mezonos" on such bread (even though one will recite the entire Birchas Hamazon after eating it). Likewise, the Chayei Adam rules that one should not recite a "borei pri ha'adama" on vegetables that grow in a non-perforated flowerpot, as a flowerpot is not considered "the ground", rather one should recite a "shehakol"<sup>2</sup>. According to the Chayei Adam, one who grows a tomato plant in a flowerpot should recite a "shehakol" before eating those tomatoes. Other Acharonim (Iglei Tal meleches Dosh s.k.8 and Sdei Chemed mareches chaf klal 100) disagree with the ruling of the Chayei Adam. They cite the ruling of the Rambam (Brachos 3:1) and Rosh (Brachos 6:16) who state that any food which requires a Birchas Hamazon after eating it, necessitates a "hamotzi" prior to eating it. Being that the Gemara in Brachos (47b) clearly indicates that one must recite Birchas Hamazon upon eating bread that was made out of wheat grown in a flowerpot, it follows that one should recite "hamotzi" prior to eating it as well. Rav Shlomo Zalman Auerbach zt"l (Kol Hatorah Vol. 40 pg. 17) points out that when the Gemara discusses bread made from such wheat, the Rishonim are silent regarding the bracha rishona to be made. This is a clear indication that they maintain that the regular bracha of hamotzi should be recited. The Iglei Tal suggests, based on the Maharal, that even the Yerushalmi only questions which bracha rishona should be said on bread, as the word "aretz" implies soil connected to the ground. However, the word "ha'adama" used in the bracha recited on vegetables, is not limited to soil connected to the ground. Accordingly, one who eats tomatoes grown in a flowerpot should recite "ha'adama".

Although some poskim (Machzeh Eliyahu Vol. 1

siman 27) uphold the ruling of the Chayei Adam who holds that a "shehakol" should be recited on a vegetable grown in a flowerpot. Many poskim (Chazan Ish as quoted by Rabbi Chaim Kanievsky zt"l, brought in Orchos Rabeinu - vol.3 p. 223, Kovetz Halachos Pesach ch. 24:6, Hagaon Rav Shlomo Zalman Auerbach zt"l as quoted in Vzos Habracha Birurim Siman 24, Harav Eliyashiv zt"l as quoted in Ashrei Ish O.C. 36:29) follow the ruling of the Iglei Tal and Sdei Chemed that "ha'adama" is the correct bracha to recite.

The above discussion, in the Poskim about something grown in an unperforated flowerpot, focuses on the fact that it does ultimately grow out of soil. Regarding a vegetable grown hydroponically, where the vegetables are not even growing in soil, there is even more reason to recite a "shehakol" rather than a "ha'adama". Nevertheless, the Shevet HaLevi (1:205) rules that one should recite "ha'adama" even on hydroponically grown vegetables. He posits that since vegetables generally grow in soil, they are always "ha'adama". Likewise, the Ohr Litziyon (V. 2 ch.14 teshuva 13) says that one should recite "ha'adama" since the vegetables are being grown from seeds that originated from the ground. However, other poskim (HaRav Shlomo Zalman Auerbach zt"l quoted in Vzos Habracha Birurin 24, HaRav Ovadia Yosef zt"l in Yechaveh Daas V. 6 siman 12) differentiate between vegetables that grow in the soil of a flowerpot in which case the bracha "ha'adama" is recited, and vegetables grown hydroponically where one should recite a "shehakol". This is also the position of Dayan Fuerst shlita. If "ha'adama" was recited on these vegetables, bedieved the bracha is considered valid as one could rely on the sevaros that suggest that the correct bracha is "ha'adama" (see also Yechaveh Daas (ibid)).

## MISC.

One who purchased a vegetable and does not know whether it was grown hydroponically or in soil, should assume that it was grown in soil and recite a "ha'adama" as most vegetables sold do grow in soil.

If one has a salad that consists of hydroponic lettuce along with small pieces of cut up soil grown vegetables and the majority ingredient is lettuce, then only a "shehakol" should be recited on the salad.

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## PESACH

The Gemara in Pesachim (35b) is explicit that one can fulfill the mitzvah of marror with lettuce or horseradish grown in a flowerpot (see Chazan Ish Kilayim 13:16). Likewise, HaRav Padwa (Cheishev HaEifod Vol.3 siman 9) rules that one can fulfill their obligation of marror using hydroponically grown lettuce. However, he concludes that in practice one should avoid using it, as it is a deviation from the mesorah of our fathers who never used such lettuce. Dayan Fuerst shlita posits that in addition to the abovementioned reason, one should preferably use romaine lettuce grown in soil at the seder because the "ha'adama" recited on the karpas is not the ideal bracha for hydroponic romaine lettuce eaten as moror. However, one who can't obtain bug free lettuce grown in soil, should certainly use hydroponic lettuce, with a reliable hashgacha, at the seder.



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<sup>1</sup> There are hydronic systems where there is a trench in the ground filled with water which is connected to the growing plants. In this type of system, the plants are considered connected to the ground, and accordingly the bracha would certainly be "borei pri ha'adama"- Vsein Bracha p.419 quoting HaRav Shlomo Zalman Auerbach, zt"l.

<sup>2</sup> See Chayei Adam who is unsure as to whether one recites a "borei pri ha'etz" on fruits that grow in a flowerpot, for the fruits are in fact grown from a tree, albeit one not attached to the ground.