

**MAINE DEPARTMENT OF AGRICULTURE
FOOD AND RURAL RESOURCES
STATE HOUSE STATION # 28
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**MAINE DEPARTMENT OF AGRICULTURE POLICY ON:
ESTABLISHMENT OF VEGETABLE GARDENS ON
SEPTIC SYSTEM DISPOSAL FIELDS**

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While there are no rules or regulations concerning the placement of vegetable gardens on or adjacent to septic system disposal fields, it is the policy of the Maine Department of Agriculture to discourage the practice. Following are the reasons for this policy:

Background:

Most septic system disposal fields designed since 1974 are installed either partly or completely above the original ground surface. This is because most of our soils in Maine have a shallow seasonal groundwater table, hardpan and/or bedrock. The bottom of the disposal field must be elevated above any “limiting factor” in order for the waste water to drain into the soil and be renovated. For the most part, fill material over the stone or other components (plastic or concrete chambers, fabric wrapped pipe, geo-textile sand filters, etc) which comprise the main body of the disposal field is usually 8” – 12” deep. Generally, only the top 4” of this fill material has silt or clay and organic matter in it. The lower part of this fill is supposed to be a gravelly coarse sand material. This is to allow for the free exchange of air into the disposal field so that microbes can quickly attack and renovate the waste water. Below the fill material, and immediately above the stone or other disposal field components is a layer of compressed hay or filter fabric. The purpose of this compressed hay or filter fabric is to prevent fine soil particles from the fill material above entering voids in the stone or other devices. The stone or other devices main function is to provide storage capacity for the wastewater which is usually generated faster than the soil can absorb it (people usually generate most of the waste water in the morning before work and school and in the evening after coming home from work). If the voids in the stone or other devices become filled with soil, they will not be able to store the waste water causing a septic system failure.

1. The most important reason you should not create a vegetable garden above or immediately adjacent to a septic system disposal field is because of the potential for the plants to become contaminated with human pathogens. The vegetable garden plants will send roots down in search of water and nutrients; neither of which will be found in the gravelly sand fill material. If the roots come in contact with waste water, they can take up pathogens such as viruses which can then infect the person eating the plants.

2. In a brand new septic system disposal field, the waste water level in the disposal field is usually quite low. Over time, however, as the disposal field matures, ponding of waste water can be expected. This is due to the partial clogging of the soil pores by particles escaping from the septic tank and the living and dead bodies of microorganisms. The thicker this clogging layer is the higher in the disposal field the waste water level will be. The waste water level will also rise during heavy use events or as a family grows up and/or adds more members. Eventually, the waste water levels in a disposal field will likely be high enough for even shallow rooted plants to come in contact with it.
3. Water (including waste water) will “wick” up into soil due to capillary attraction. If waste water rises high enough in the disposal field to come in contact with the fill material on top of it, capillary attraction could cause the waste water to wick up to as high as 18” above, depending on the texture of the fill. This is also why no vegetable garden should be placed on a disposal field fill extension, especially near the disposal field. There may be no wicking up to the top of the disposal field or fill extension material at first but it may occur as the disposal field matures.
4. Generally, the soil over the top of a septic system disposal field is very droughty, particularly soon after the disposal field is installed, and therefore not suitable for the growing of a vegetable garden. This would create the need for watering of the plants in order for them to prosper. Adding water to the top of a disposal field, particularly if the disposal field was only marginally functional, could cause it to fail.
5. Roto-tilling the top of a disposal field could result in damage to the compressed hay or filter fabric. If the compressed hay or filter fabric is damaged, it could allow soil particles to migrate down into the stone or other devices in the disposal field reducing the waste water holding capacity.
6. Placing additional fill over the top of a disposal field, in order to create a safe zone for vegetable plants to grow is also not a good idea. The additional fill material might “suffocate” the disposal field by making it more difficult for the free exchange of air. An anaerobic disposal field is much more likely to clog up and fail than an aerobic one. In addition, placing the additional fill material on the disposal system could result in damage to disposal field components by heavy equipment.

The most suitable plants to grow on top of septic system disposal fields and fill extensions is grass. It is also permissible to grow flowers but only if the soil is not roto-tilled and minimal watering is done. No plants that have woody roots should be planted on the disposal field or fill extensions since the roots might clog up pipes and other devices in the disposal field. If you do not want vegetation to grow over your disposal field, it is permissible to cover the bare soil with bark mulch.