



Frequently Asked Questions (FAQ) for the Control of Phorid Flies in the Mushroom Industry:

Why is there an increase in the number of Phorid flies in Chester County?

Multiple factors converge that contribute to increased phorid fly populations, such as warming temperatures, increased humidity year-round and an inconsistent adoption of best management practices. Phorid fly feeds on fungi and plants and reproduces in dark, humid environments, making mushroom production houses prime areas for Phorid flies. This pest lays its eggs in soil, where its larvae then feed on the roots, known as mycelium, of healthy fungi, making Phorid fly a threat to mushroom harvests. The Phorid only breeds in mushroom houses. This small, nuisance fly can also be carried by winds into residences in areas surrounding mushroom houses. The rapid increase in the fly population during increasingly longer periods of warmer weather in Pennsylvania is causing production losses inside mushroom farms and quality-of-life concerns for residents.

What is the Department doing to address this situation?

The Department is using its authority under the Plant Pest Act to implement a quarantine order for mushroom farms not currently implementing best practices in Chester County municipalities where the Phorid fly is most acute. The quarantine order will require all mushroom farms in the impacted area to perform a heat-treatment process, called “steaming off” that raises the temperature of the indoor growing areas to kill all flies and fly larvae. This is an established industry best management practice that has proven effective.

The Department is working with federal partners at the Environmental Protection Agency on the review of additional chemical control treatments that may be effective at killing Phorid flies inside mushroom growing facilities. This would assist producers by providing a diversity of approaches to control Phorid fly and prevent the development of pest resistance to products.

The Department is continuing to fund research with Penn State University to [explore effective and long-term treatment options](#) for controlling Phorid flies inside mushroom farms.



Why should the mushroom industry be concerned about Phorid Fly?

Phorid Fly can cause significant crop losses in affected mushroom houses, resulting in 10-40% of the crop being lost. If left unchecked, this pest can reproduce quickly and cause nuisances to neighbors and other mushroom operations in the area through the transport of materials, soils, waste, and mushrooms.

What are mushroom farmers required to do to comply with this order?

Under the quarantine order, mushroom producers located in municipalities identified must follow the said order for Phorid Fly. This includes the facilities used to grow mushrooms and the substrate that Phorids breed in and feed on. The quarantine order will not restrict the movement or sale of products or materials coming to or from a mushroom farm, provided they adhere to the prescribed protocols and best management practices.

What best management practices are available to mushroom growers to control Phorid Fly?

The Department is requiring mushroom houses in the affected area to implement “steaming off” a common process that raises the heat inside the mushroom grow facilities, creating the best results in killing flies and larvae. The majority of mushroom producers already implement this technique to control this pest; however, all growers must adopt this best management practice to be successful. Steaming off prevents pests and pathogens from spreading to subsequent or adjacent crops when substrate is removed from the growing room. It also kills Phorid Flies at all stages of life, along with fungal, bacterial, and viral pathogens in mushroom substrate and wooden bed boards, thereby reducing the risk of spreading Phorid Fly to new crops or neighboring areas.

How do I steam off a mushroom house?

In conjunction with Penn State University, the Department has made available a step-by-step guide that provides growers’ the most effective techniques on how to “steam off” depending on the Phases implemented by a mushroom grower. Please refer to the [guidelines supplied by Penn State University](#) and in [the quarantine order](#).



Are there resources available to assist mushroom growers in implementing steaming off in their mushroom house?

The Department is making grant funds available through the Chester County Conservation District to assist impacted mushroom growers cover eligible costs for “steaming off” for a limited period. Eligible costs will include steam generation equipment, insulation materials, piping and fittings, and modifications and upgrades to existing infrastructure. For more information on eligibility and availability of funds, please contact the Chester County Conservation District at (610) 455-1381.

What effect does the quarantine order have on the transport and sale of mushrooms grown in the affected area?

There are no movement, transport, or sale restrictions on mushroom crops, compost, or other products in the affected quarantine area. Business is to continue as normal with no disruptions.

Who can I contact with additional questions?

Please contact the Department of Agriculture’s Bureau of Plant Industry at: (717) 787-4843 or at RA-AGPhorid@pa.gov.