

Lisa Jackson, Commissioner
NJDEP
401 E State Street
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Trenton, NJ 08625-0402

January 11, 2007

Charles M. Kuperus, Secretary
NJ Department of Agriculture
PO Box 330
Trenton, NJ 08625-0330

Re: Proposed Amendment to N.J.A.C. 2:23 to include synthetic pesticide Dimilin for gypsy moth control

Dear Commissioner Jackson and Secretary Kuperus:

The twenty five undersigned organizations are writing to you to express concern that a proposal is moving forward within Department of Agriculture's gypsy moth suppression program. DOA is proposing to amend its regulations to permit the synthetic chemical pesticide Dimilin (diflubenzuron) to be used for gypsy moth aerial spraying over forested residential areas (estimated to be 50,000 acres) in 14 counties under certain conditions where egg mass counts are over 4,000 per acre. In addition, we have heard that DEP Division of Parks and Forestry is proposing to use Dimilin in state park areas where the egg masses are 4,000 per acre or more - up to 28,000 acres potentially. We believe use of Dimilin for the proposed purpose is both unsafe and unnecessary.

The pesticide Dimilin has a label restriction with a 150 foot buffer to streams and waterways because of its acute toxicity to aquatic organisms. Dimilin has potential human health effects that make it inappropriate for aerial application over residential areas in New Jersey.

Since 1985, the Department of Agriculture and the NJDEP have used ONLY Bt, a biological pesticide with no known mammalian toxicity, as the pesticide of choice for the gypsy moth suppression aerial spray program in municipalities and in state parks and forests. In fact, DOA's regulations explicitly state that DOA "select the most efficacious **non-chemical insecticide** (Bacillus thuringiensis)". DEP's own pesticide regulations ban aerial spraying of broad spectrum pesticides for non-agricultural purposes. An exemption could be made for agricultural, health or environmental emergencies (N.J.A.C.7:30-10 (t).1.). DOA will likely be applying for that exemption.

Our concerns over this proposal arise from the potential effects on human health and biodiversity from the chemical Dimilin, as well as the aerial method of application. Non-target effects of Diflubenzuron, the active ingredient in Dimilin, include adverse environmental effects on freshwater and estuarine marine invertebrates, requiring a 150 foot buffer to waterways, and the human risk from Diflubenzuron from its metabolite,

PCA (p-chloroaniline) a class B2 carcinogen (probable human carcinogen). Diflubenzuron, a haloaromatic substituted urea (chlorinated diphenyl compound), acts as a chemical growth regulator that inhibits chitin formation in invertebrates, including, but not limited to, gypsy moth caterpillars. Diflubenzuron has also been shown to affect vertebrate species. Dimilin, an endocrine disruptor, causes reduced testosterone production in birds. (US EPA Special Report on Environmental Endocrine Disruption: An Effects Assessment and Analysis, February 1997). In humans, it could cause methemoglobinemia, also known as blue baby syndrome (US EPA Recognition and Management of Pesticide Poisoning, 5th edition). It has a long window (2 weeks- 4 months) of residual, which makes it more likely to affect non-target organisms and expose humans in and near the spray area through drift and runoff.

Aerial spraying poses its own risks from drift and the inherent danger of low flying aircraft. The proposed DOA aerial spray areas are all in forested residential areas, and inevitably direct human exposure occurs. We do not believe the DEP should lift its ban on aerial spraying of a chemical insecticide over residential areas, nor on state parklands, because the human population is not removed from the site during application, the way a farm field would be cleared of workers during a pesticide application. New Jersey public policy has generally not supported aerial application of broad spectrum pesticides over residential areas except in extreme circumstances like the threat of West Nile Virus from mosquitoes. Even then, aerial application was extremely limited and not without its critics because of efficacy concerns. Without human intervention, gypsy moth populations rise and fall in cycles, and are subject to collapse due to a naturally occurring fungus. Spraying has a questionable impact on the cycle; in fact, some scientists believe spraying may actually prolong the cycle.

We believe that it is not necessary to use Dimilin in the gypsy moth suppression program because on balance, Bt. has proven effective at providing foliage protection and while it may require more applications and more time for the population to reduce in areas of high infestation, its lack of toxicity to non target organisms makes it the safest choice for the state program. According to Dale Schweitzer, Ph.D, author of the 2004 report *Gypsy Moth: Impacts and Options for Biodiversity for Land Managers* (. NaturServe. <http://www.natureserve.org/publications/library.jsp#techrpts>), second author of the most comprehensive USFS laboratory study on non-target impacts of *Btk*, and a member of NJ's Endangered and Non-Game Species Advisory Council , **"If maintaining biodiversity is among the management objectives in NJ State Parks and State Forests then that alone should contraindicate use of Dimilin since neither *Btk* or no-action approaches Dimilin in terms of non-target impacts. "**

We write in opposition to both the proposed rule change (DOA) and the emergency exemption for aerial spraying of chemical pesticides over residential areas (NJDEP) because we believe the existing regulations strike the proper balance. While gypsy moth is a nuisance pest and can contribute to oak tree mortality, it is not a human health threat, nor a disease vector. We believe that given the potential harm to human health and biodiversity by the chemical pesticide Dimilin, the Departments should err on the side of

caution and stand by their regulations that have been in effect for more than twenty years. Those regulations were hotly debated in the early 1980's during intense periods of gypsy moth defoliation, and the resolution to use the biological pesticide Bt, while not a perfect solution, met the needs to protect trees from repeated defoliation while also minimizing human and wildlife exposure to chemical pesticides, including Dimilin, that have potential adverse effects – cancer, reproductive effects, and acute toxicity hazards to humans and wildlife.

Please accept these initial comments on the proposed regulations amendment. References are attached which further define the problems and issues with chemical pesticide spraying of Dimilin. Responses may be sent to Jane Nogaki, NJ Environmental Federation at 223 Park Avenue, Marlton, NJ 08053 or Janogaki@cleanwater.org.

Sincerely,

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NJ Environmental Federation

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Pinelands Preservation Alliance

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cc: Joseph W. Zoltowski (agpzolt@ag.state.nj.us)

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