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COUNTY OF GLOUCESTER  
STATE OF NEW JERSEY

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OFFICE OF THE COUNTY  
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[www.gloucestercountynj.gov](http://www.gloucestercountynj.gov)

The County of Gloucester complies with all state and federal rules and regulations against discrimination in admission to, access to, or operations of its programs, services, and activities. In addition, County encourages participation of people with disabilities in its programs and activities and offers special services to all residents 60 years of age and older. Inquiries regarding compliance may be directed to the County's ADA Coordinator at (856) 384-6842/ New Jersey Relay Service 711.



April 1, 2025

Honorable John Bruno  
Franklin Township  
1571 Delsea Drive  
Franklinville, NJ 08322

Dear Mayor Bruno,

As mandated by the New Jersey Department of Environmental Protection Pesticide Control Program (NJDEP), enclosed please find an information packet containing questions and answers pertaining to Mosquitoes, Mosquito Control, Mosquito Pesticides, Spotted Lantern Fly Treatments, Spotted Lantern Fly Insecticides and Right of Way Herbicides. The enclosed information packet will be distributed to your town annually between March 1<sup>st</sup> and March 31<sup>st</sup> of each year, prior to Mosquito Control Treatments, Right of Way Herbicide Treatments or Spotted Lantern Fly Treatments targeting county wide applications.

The information packet contains the following:

- NJ DEP product fact sheets for each pesticide used to control mosquitoes, Right of Way Vegetation, and Spotted Lantern Flies.
- Questions and answers regarding the mosquito control, Right of Way, and spotted Lantern Fly program for the County.
- Where to get information for your questions regarding mosquito control, Right of Way Treatments, and Spotted Lantern Flies, all pesticides and herbicides used to control the above listed pests and mosquito borne diseases.

- What County residents may do to help mitigate mosquito and Spotted Lantern Fly problems

We encourage you to share this information with all residents in your community.  
Please contact us at 856-307-6400 if you should require additional information.

Sincerely,

A handwritten signature in black ink that reads "Wayne James Wurtz". The signature is written in a cursive style with a large, stylized "W" at the beginning.

Wayne Wurtz

Gloucester County Mosquito Supervisor



Scan QR Code for Mosquito Treatment Request

**Gloucester County  
Mosquito Control Program**

**PUBLIC WORKS DEPARTMENT**

1200 N. Delsea Drive

Clayton, NJ 08312

***WE WERE HERE  
to inspect for larval and  
adult mosquitoes***

Site \_\_\_\_\_

Date \_\_\_\_\_ Time \_\_\_\_\_

- No larval breeding present
- Larval mosquitoes present
- Area treated for larval mosquitoes
- No adult mosquitoes present
- Area treated for adult mosquitoes

Comments \_\_\_\_\_

Inspector \_\_\_\_\_

**If you have any questions about  
these mosquito control efforts,  
please contact us at 856-307-6400**

*Please turn over for tips on how you can help to  
reduce mosquito breeding areas on your property.*

**Mosquito breeding around the home  
can be greatly reduced by following  
these simple steps:**

- ✓ Dispose of old cans, plastic buckets, ceramic pots, or other containers that may collect water on your property
- ✓ Properly dispose of old, discarded tires-these can produce thousands of mosquitoes in just one season
- ✓ Clean clogged roof gutters at least annually-these can produce millions of mosquitoes each season
- ✓ Eliminate water collecting in pool or boat covers
- ✓ Drill holes in bottom of recycling containers left outdoors to prevent them from collecting rainwater
- ✓ Turn over plastic wading pools and wheelbarrows when not in use
- ✓ Do not allow water to stagnate in bird baths
- ✓ Eliminate standing water around animal troughs
- ✓ Drain standing puddles, ditches, tree holes or tree stumps

A service of the Gloucester County  
Board of Commissioners  
*Frank J. DiMarco, Director*  
*Matthew Weng, Liaison*

**GLOUCESTER COUNTY PUBLIC WORKS/MOSQUITO CONTROL**  
**DIVISION**

**MOSQUITO CONTROL**

**PUBLIC NOTICE IS HEREBY GIVEN**

In compliance to Section 9.10 & 9.15 of the New Jersey Pesticide Control code (N.J.A.C. Title 7, Chapter 30) the Gloucester County Public Works, Mosquito Control Division (MCD) will be applying pesticides for the control and reduction of adult populations on an area-wide basis as needed, throughout Gloucester County during the period of April 6, 2025 to October 31, 2025. Township residents can request a packet of information from their Mayor's Office regarding a state approved "Questions and Answers" sheet and proposed individual pesticides used throughout Gloucester County, which explains everything you need to know about our program, important phone numbers and your health and well being.

The pesticides to be used in these programs will be **Fyfanon ULV®**-(Malathion), **Duet HD/Duet Adulicide®**-(Prallethrin-Sumithrin), **Zenivex®** – (Etofenprox), **DeltAGard®**-(Deltamethrin), **PermaSease® 4-4 & PermaSease® 3-15** – (Permethrin and Piperonyl Butoxide), **Anvil 2+2®** - Sumithrin®-Piperronyl Butoxide), **ReMoaTri®** - Fenpropathrin/Abamectin and **Merus 3.0** – (Pyrethrins). All chemicals will be applied by truck, aircraft or hand held Ultra Low volume spraying equipment for adult mosquito control.

In case of any pesticide emergency, please contact The New Jersey Poison Information and Educational System @ 1-800-222-1222 for routine pesticide related health inquires.

Upon request the MCD shall provide a resident with notification at least 12 hours prior to the application, except for Quarantine and Disease Vector Control only, when conditions necessities pesticide applications sooner than that time.

Updated information on the time and location of adulticide applications can be found and reviewed @ <http://www.co.gloucester.nj.us/depts/p/pw/highway/mosdiv/mosl.asp>. For those seeking further information please contact Wayne J. Wurtz, Jr., General Supervisor, NJCPA license number 69093A at The Gloucester County Public Works/Mosquito Control Division @ 1-856-307-6400, between 8:00 am and 4:00 pm, Monday thru Friday, except on holidays.

**For information on pesticide regulations, pesticide complaints and health referrals, contact the New Jersey Pesticide Control Program @ 1-609-984-6568.**

## **GLOUCESTER COUNTY PUBLIC WORKS**

### **VEGETATION CONTROL**

#### **PUBLIC NOTICE IS HEREBY GIVEN**

In compliance to Section 9.10 & 9.15 of the New Jersey Pesticide Control code (N.J.A.C. Title 7, Chapter 30) the Gloucester County Public Works will be applying herbicides for the control of Roadside Vegetation on an area-wide basis as needed, throughout Gloucester County during the period of March 30, 2025 to September 30, 2025. Township residents can request a packet of information from their Mayor's Office regarding a state approved "Questions and Answers" sheet and proposed individual pesticides used throughout Gloucester County, which explains everything you need to know about our program, important phone numbers and your health and well being.

The herbicides to be used in the Roadside Vegetation program will be **Roundup PRO®** (Active ingredient – Glyphosate), **Trimec®922** (Active ingredient – 2,4-D, dimethylamine salt, Dimethylamine Dicamba and MCPP-p Dimethylamine Salt.) and **EsplAnade EZ®** (Active ingredient – Indaziflam, Diquat dibromide, and Glyphosate isopropylamine salt. All herbicides will be applied by low pressure truck mounted sprayer or hand-held sprayer.

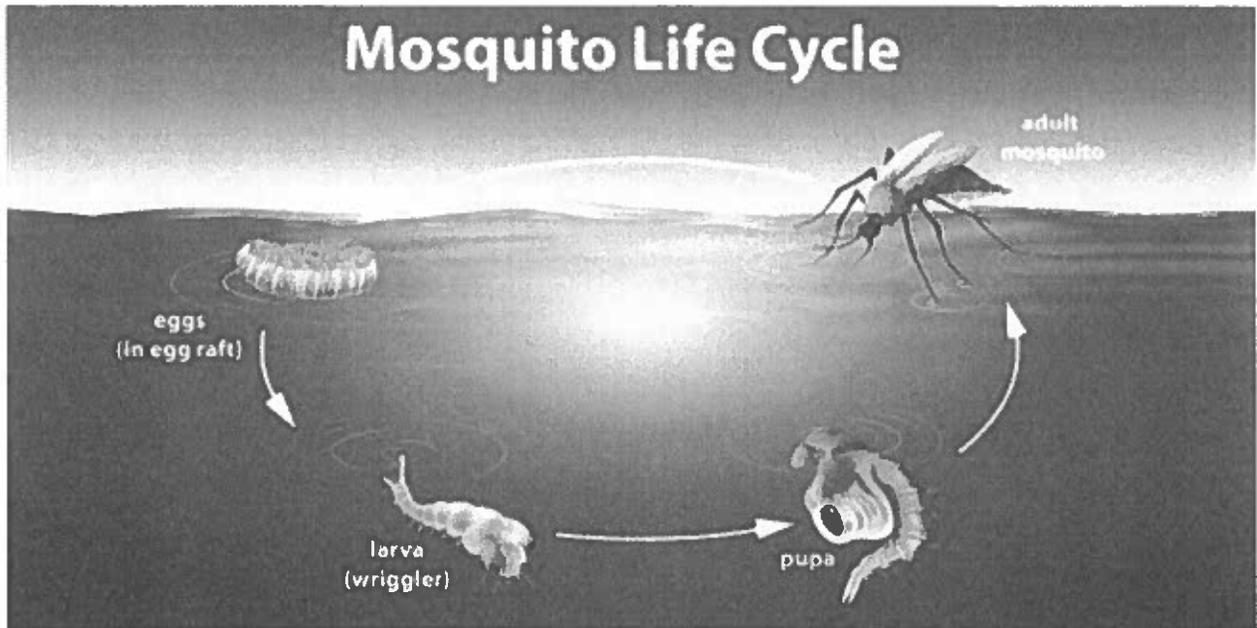
In case of any pesticide emergency, please contact The New Jersey Poison Information and Educational System @ 1-800-222-1222 for routine pesticide related health inquiries.

Upon request the GCPW shall provide a resident with notification at least 12 hours prior to the application, except for Quarantine and Disease Vector Control only, when conditions necessities pesticide applications sooner than that time.

Updated information on the time and location of herbicide applications can be found and reviewed @ <http://www.co.gloucester.nj.us/depts/p/pw/highway/mosdiv/msl.asp>. For those seeking further information please contact Wayne J. Wurtz, Jr., General Supervisor, NJCPA license number 69093A at The Gloucester County Public Works/Mosquito Control Division @ 1-856-307-6400, between 8:00 am and 4:00 pm, Monday thru Friday, except on holidays.

**For information on pesticide regulations, pesticide complaints and health referrals, contact the New Jersey Pesticide Control Program @ 1-609-984-6568.**

**Gloucester County**  
**Mosquito Control Division**



**What does the agency do?**

The division performs "all acts which in its opinion may be necessary for the elimination within the County." A comprehensive surveillance program guides the agency's activities and control is emphasized on the elimination of mosquito-breeding habitat and eradication of mosquitoes when they are still in the aquatic stages of their development. Surveillance for mosquito borne diseases is performed throughout Gloucester County for West Nile Virus, Eastern Equine Encephalitis, Jamestown Canyon Virus and several other Mosquito borne diseases.

**What control efforts are used by our agency?**

In order to accomplish long-range and environmentally sound mosquito control, we employ an Intergrated Pest Management (IPM) approach. This program

### **When is the agency active?**

Mosquito Control is a year round activity. Generally, the seasonal control program starts in March with the hatching of snow pool mosquito species and continue into November until the temperatures drop or the first frost. During the winter months, we perform follow-up record keeping on the season's mosquito activity at all larvaicide sites, which continues beyond the active mosquito season. The inspection routes are revised, surveillance data is analyzed to identify areas of high mosquito populations and virus activity, and all equipment is maintained and prepared for next season. In addition, plans and protocols are revised for the next mosquito season. Public education is also an important component of our program. Our mosquito personnel are available for mosquito education presentations at local schools, community and civic groups.

### **What can a homeowner do?**

Homeowners can help us in the Mosquito control battle, by eliminating standing water on their property. Any container holding water is a potential mosquito-breeding source and is likely causing problems around the area. Of concern are clogged gutters and scattered tires. Both tend to collect leaves, then fill with water and provide extremely attractive sites for mosquitoes to breed. Since these containers are watertight, they dry out very slowly and are generally the cause of mosquito problems around the homes. Gutters should be kept clean and other containers removed or overturned to limit mosquito-breeding sites. Item such as dog water bowls, horse-watering troughs, and birdbaths should be emptied and refilled a least once a week. Small lower areas in the yard can be filled to prevent the accumulation of water. If larger wet areas exit on the property or on nearby properties, this should be brought to the attention of the Gloucester County Mosquito Control Division. See list below for additional steps homeowners can take to reduce mosquito populations around the home include:

- **Dump all standing water from containers around the home. This includes children's pools, flower pots, tarps, garbage and recycling cans, tires, buckets, kid's toy's, boats and canoes.**

## **Where can I find more specific information on mosquito spraying in Gloucester County and how will I be notified of the spraying?**

The community will be notified of any adulticiding activity in Gloucester County whether by ground or aerial applications through announcements in two local newspapers, via our agency web site @

**<http://www.gloucestercountynj.gov/Mosquito>**

When you visit our web site, you can review a brief summary of our mosquito operation, review information pertaining to controlling mosquitoes around your home, our Spotted Lantern Fly treatment program, and a link to the Gloucester County Health Dept. Web page on Mosquito and Tick information. You can also review the Scheduled Mosquito Spray Locations listed on the site. The site, which is updated daily. The information listed includes Road names, Towns and the Date and Time of application. All treatment dates and times may be rescheduled due to weather conditions.

## **How can county residents contact The Gloucester County Mosquito Control?**

If mosquito present a problem in your area, or you would like a site inspected by our division personnel, the below contact information may be used.

**The Gloucester County Public Works, Mosquito Control Division  
1200 North Delsea Drive.  
Clayton, NJ 08312  
Tel: 856-307-6400**

**If requesting a Mosquito Service Request.**

**Please go to the Gloucester Co Mosquito Control Website.**

**You can enter a Mosquito Service Request form online.**

**By submitting a service request, you agree to be contacted by the County of Gloucester, via email, text (SMS) message or phone call, the day prior to any service being performed.**

### What is 2,4-D?

2,4-D is an herbicide that kills plants by changing the way certain cells grow. 2,4-D comes in several chemical forms, including salts, esters, and an acid form. The toxicity of 2,4-D depends on its form. The form also affects what will happen to 2,4-D in the environment and what impacts it may have, especially on fish. 2,4-D is used in many products to control weeds, and it is often mixed with other herbicides in these products.

2,4-D was first used in the United States in the 1940s. Agent Orange, an herbicide used during the Vietnam War, contained both 2,4-D and 2,4,5-T. Dioxin, a by-product of 2,4,5-T, led to the ban of Agent Orange.



### What are some products that contain 2,4-D?

Products containing 2,4-D may be liquids, dusts, or granules. The liquid forms may be concentrated or ready-to-use. There are over a thousand products with 2,4-D in them that are sold in the United States.

Always follow label instructions and take steps to avoid exposure. If any exposures occur, be sure to follow the First Aid instructions on the product label carefully. For additional treatment advice, contact the Poison Control Center at 1-800-222-1222. If you wish to discuss a pesticide problem, please call 1-800-858-7378.

### How does 2,4-D work?

2,4-D kills broadleaf weeds but not most grasses. 2,4-D kills plants by causing the cells in the tissues that carry water and nutrients to divide and grow without stopping. Herbicides that act this way are called auxin-type herbicides.



### How might I be exposed to 2,4-D?

Products with 2,4-D may be used on farms, home lawns, roadsides, industrial areas, and pastures. You may be exposed if you are applying 2,4-D and you get it on your skin, breathe it in, or eat or smoke afterwards without washing your hands. You also may be exposed if you touch plants that are still wet with spray. You can limit exposure by following the label carefully if you are using products that contain 2,4-D. You can also stay away from grass or plants that have been treated until the leaves are dry.

NPIC General Fact Sheets are designed to provide scientific information to the general public. This document is intended to promote informed decision-making. Please refer to the Technical Fact Sheet for more information.

### Are children more sensitive to 2,4-D than adults?

While children may be especially sensitive to pesticides compared to adults, there are currently no data to conclude that children have increased sensitivity specifically to 2,4-D.



### What happens to 2,4-D in the environment?

2,4-D goes through different changes in the environment depending on its form. Most of the time, 2,4-D breaks down in soil so that half of the original amount is gone in 1-14 days. This breakdown time is called the "half-life" of the pesticide. One form of 2,4-D, the butoxyethyl ester, had a much longer half-life in aquatic sediment of 186 days.

2,4-D is broken down by bacteria in water and in soil. Water alone can also break down 2,4-D. 2,4-D has been found at low levels in shallow groundwater and streams in both rural and urban areas.



### Can 2,4-D affect birds, fish, or other wildlife?

How 2,4-D affects animals and plants depends on the form of 2,4-D. Some of the ester forms of 2,4-D can be very toxic to fish and other aquatic life. The salt forms may be only slightly toxic to aquatic animals. Aquatic animals are more sensitive to 2,4-D as water temperature rises. 2,4-D may be moderately toxic to practically non-toxic to birds if they eat it. Eggs sprayed with 2,4-D still hatched and the chicks were normal. 2,4-D is practically non-toxic to honeybees. It is not expected to be a hazard to other beneficial insects.

### Where can I get more information?

For more detailed information call the National Pesticide Information Center, Monday - Friday, between 8:00 AM and 12:00 PM Pacific Time (11:00 AM to 3:00 PM Eastern Time) at 1-800-858-7378 or visit us on the web at <http://npic.orst.edu>. NPIC provides objective, science-based answers to questions about pesticides.

**Date Reviewed: March 2009**

NPIC is a cooperative agreement between Oregon State University and the U.S. Environmental Protection Agency (U.S. EPA, cooperative agreement # X8-83458501). The information in this publication does not in any way replace or supersede the restrictions, precautions, directions, or other information on the pesticide label or any other regulatory requirements, nor does it necessarily reflect the position of the U.S. EPA.

### What is dicamba?

Dicamba is a selective herbicide in the chlorophenoxy family of chemicals. It comes in several salt formulations and an acid formulation. These forms of dicamba have different properties in the environment. Products with dicamba frequently contain other herbicides as well.

### What are some products that contain dicamba?

Products containing dicamba may be liquids, dusts or granules. Products may be concentrated or ready-to-use. Currently, dicamba can be found in over 1100 products that are sold in the United States. It is used in agriculture, residential areas, and other sites.



Always follow label instructions and take steps to avoid exposure. If any exposures occur, be sure to follow the First Aid instructions on the product label carefully. For additional treatment advice, contact the Poison Control Center at 1-800-222-1222. If you wish to discuss a pesticide problem, please call 1-800-858-7378.

### How does dicamba work?

Dicamba is similar to the herbicide 2,4-D. Both act like natural plant hormones known as auxins. These hormones help to control plant growth. When plants are treated with dicamba, they grow in abnormal and uncontrollable ways, and often, the plants die. Dicamba is used on many broadleaf weeds and woody plants.



### How might I be exposed to dicamba?

Products with dicamba may be used in many places including on home lawns, farms, golf courses and rights-of-way along utility lines, roadsides and railways. You may be exposed if you are applying dicamba and you get it on your skin, inhale it, or eat or smoke afterwards without washing your hands first. You also may be exposed if you touch plants that are still wet with spray. You can limit exposure by following the label carefully if you are using products that contain dicamba. You can also stay away from grass or plants that have been treated until the leaves are dry.

In some cases, dicamba can be found in well water but typically at low levels. These levels are usually so low that no effect on human health is expected. Dicamba has also been found in house dust in farmer's homes at very low levels.

NPIC General Fact Sheets are designed to provide scientific information to the general public. This document is intended to promote informed decision-making. Please refer to the Technical Fact Sheet for more information.

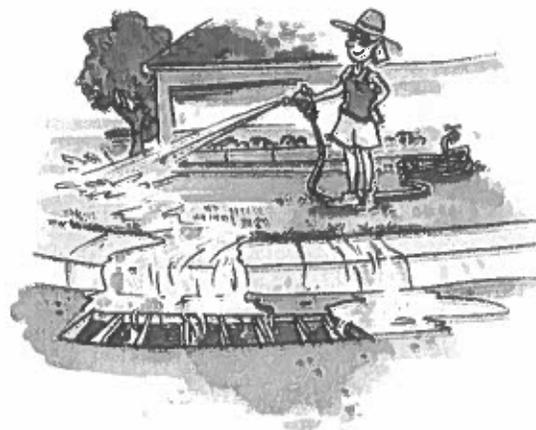
### Are children more sensitive to dicamba than adults?

While children may be especially sensitive to pesticides compared to adults, there are currently no data showing that children have an increased sensitivity specifically to dicamba.

### What happens to dicamba in the environment?

When dicamba is applied to plants, it can be absorbed by the leaves and roots. It can travel throughout the plant, but the amount and speed of movement depends on the plant. In water, microbes and ultraviolet (UV) light can break down dicamba.

Dicamba breaks down in soil so that half of the original amount is gone in 30-60 days. Water and microbes in soil can speed up the breakdown of dicamba. Sometimes following an application, dicamba can become airborne and cause damage to nearby plants.



### Can dicamba affect birds, fish, or other wildlife?

The salt forms of dicamba are not likely to hurt birds if eaten. The acid form is slightly or moderately toxic to birds. Dicamba is not likely to harm fish because of its low toxicity. Among several studies in fish exposed to dicamba, results showed that dicamba was relatively non-toxic to fish.

### Where can I get more information?

For more detailed information call the National Pesticide Information Center, between 8:00 AM and 12:00 PM Pacific Time (11:00 AM to 3:00 PM Eastern Time), Monday - Friday, at 1-800-858-7378 or visit us on the web at <http://npic.orst.edu>. NPIC provides objective, science-based answers to questions about pesticides.

**Date Reviewed: February 2012**

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### What is deltamethrin?

Deltamethrin is an insecticide belonging to the pyrethroid family. Pyrethroids are the man-made versions of pyrethrins, natural insecticides from chrysanthemum flowers. Deltamethrin is used outdoors on lawns, ornamental gardens, golf courses, and indoors as a spot or crack and crevice treatment. In its purest form, deltamethrin is colorless or white to light beige crystals that have no odor.

Deltamethrin was first described in 1974 and entered the marketplace in 1978.



### What are some products that contain deltamethrin?

Deltamethrin is in a variety of products used to kill a wide range of insects. Deltamethrin can be formulated in insecticide products as aerosols, sprays, dusts, granules and wettable powders. The illegal, unregistered product known as "Chinese Chalk" or "Miraculous Chalk" often contains deltamethrin as the active ingredient. "Chinese Chalk", "Miraculous Chalk", and products like them are not registered for use in the United States and illegal products such as these should be avoided at all times.

Always follow label instructions and take steps to avoid exposure. If any exposures occur, be sure to follow the First Aid instructions on the product label carefully. For additional treatment advice, contact the Poison Control Center at 1-800-222-1222. If you wish to discuss a pesticide problem, please call 1-800-858-7378.

### How does deltamethrin work?

Deltamethrin can kill insects by direct contact or if they eat it. It disrupts their normal nervous system function. It is less toxic to mammals due to their higher body temperature, larger body size, and decreased sensitivity to the chemical.

### How might I be exposed to deltamethrin?

You can be exposed to deltamethrin if you touch, eat, or breathe it in. As an example, it could be breathed in if a fine mist or dust containing deltamethrin gets in the air you breathe. Exposure to deltamethrin can be limited by reading and following label directions.



NPIC General Fact Sheets are designed to provide scientific information to the general public. This document is intended to promote informed decision-making. Please refer to the Technical Fact Sheet for more information.

### What happens to deltamethrin in the environment?

When deltamethrin gets in the soil, it has a tendency to bind tightly to soil particles. It has a half-life ranging from 5.7-209 days. Half-life is the measure of time it takes for half of the applied amount to break down. The half-life can change based on soil chemistry, temperature, water content and the amount of organic matter in the soil. Deltamethrin does not break down as quickly in soil with a high clay or organic matter content. Deltamethrin is broken down by microbes, light, and water. Its two major breakdown products move more easily in the soil than deltamethrin itself.

Deltamethrin is not likely to evaporate into the air or dissolve easily into water.

Deltamethrin has a half-life of 5.9-17 days on plant surfaces. It is unlikely to be taken up by plants, since it binds to soil particles so tightly.

### Can deltamethrin affect birds, fish, or other wildlife?

Deltamethrin is moderately to highly toxic to fish under laboratory conditions. However, when products are used according to the label, deltamethrin is less likely to affect fish. This is because it is more likely to be bound to the sediment.

Deltamethrin is practically non-toxic to birds when they eat it.

Deltamethrin is highly toxic to honeybees under laboratory conditions. It did not harm bees in field studies, and formulated products actually had a repellent effect that lasted for 2-3 hours.

Earthworms were not affected when soil was treated with deltamethrin.



### Where can I get more information?

For more detailed information call the National Pesticide Information Center, Monday - Friday, between 8:00 AM and 12:00 PM Pacific Time (11:00 AM to 3:00 PM Eastern Time) at 1-800-858-7378 or visit us on the web at <http://npic.orst.edu>. NPIC provides objective, science-based answers to questions about pesticides.

**Date Reviewed: February 2010**

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### **What are some signs and symptoms from a brief exposure to glyphosate?**

Pure glyphosate is low in toxicity, but products usually contain other ingredients that help the glyphosate get into the plants. The other ingredients in the product can make the product more toxic. Products containing glyphosate may cause eye or skin irritation. People who breathed in spray mist from products containing glyphosate felt irritation in their nose and throat. Swallowing products with glyphosate can cause increased saliva, burns in the mouth and throat, nausea, vomiting, and diarrhea. Fatalities have been reported in cases of intentional ingestion.

Pets may be at risk if they touch or eat plants that are still wet with spray from products containing glyphosate. Animals exposed to products with glyphosate may drool, vomit, have diarrhea, lose their appetite, or seem sleepy.

### **What happens to glyphosate when it enters the body?**

In humans, glyphosate does not easily pass through the skin. Glyphosate that is absorbed or ingested will pass through the body relatively quickly. The vast majority of glyphosate leaves the body in urine and feces without being changed into another chemical.



### **Is glyphosate likely to contribute to the development of cancer?**

Animal and human studies were evaluated by regulatory agencies in the USA, Canada, Japan, Australia, and the European Union, as well as the Joint Meeting on Pesticide Residues of the United Nations and World Health Organization (WHO). These agencies looked at cancer rates in humans and studies where laboratory animals were fed high doses of glyphosate. Based on these studies, they determined that glyphosate is not likely to be carcinogenic. However, a committee of scientists working for the International Agency for Research on Cancer of the WHO evaluated fewer studies and reported that glyphosate is probably carcinogenic.

### **Has anyone studied non-cancer effects from long-term exposure to glyphosate?**

Long-term feeding studies in animals were assessed by the US Environmental Protection Agency (EPA) and other regulatory authorities. Based on these evaluations, they found there is no evidence glyphosate is toxic to the nervous or immune systems. They also found it is not a developmental or reproductive toxin.

### **Are children more sensitive to glyphosate than adults?**

As required by the Food Quality Protection Act, the EPA has determined that children are not more sensitive to glyphosate as compared to the general population.

***Municipalities are encouraged to share this information with all residents in their community***

***"Merus 3.0 "***

This **Fact Sheet** answers some basic questions about mosquito control products in use in your county. The Gloucester County Mosquito Control Division, along with several other resources (listed at the end of this sheet), can provide more detailed information.

**What is Merus 3.0™ and how is it used?**

**Merus 3.0™** contains botanical insecticides called **pyrethrins**, a class of organic compounds extracted from *Chrysanthemum* flowers. Unlike most pyrethroids (the synthetic equivalent of pyrethrins that are more commercially available), **Merus 3.0™** does not contain additional chemical synergists such as piperonyl butoxide. **Merus 3.0™** is Organic Materials Review Institute (OMRI) listed and meets National Organic Program (NOP) standards for adult mosquito control in and around organic gardens, farms and crops. It poses a low risk to human health and the environment when used properly as part of an integrated mosquito control program. Pyrethrins are considered non-carcinogenic at exposure relevant to human use, and no data is available to indicate the product or any components present at greater than 0.1% are mutagenic or teratogenic.

**Merus 3.0™** is used for the control of adult mosquitoes. While habitat management and measures to control immature mosquitoes in water are preferred and most used, the spraying of adult mosquitoes is necessary when biting populations reach critical levels or when a disease organism is present in adult mosquitoes. A very fine mist is sprayed into the air since flying mosquitoes must directly contact the pesticide in order for it to be effective.

**How can I reduce my exposure to Merus 3.0™?**

Because of the very small amounts of active ingredients released per acre, the risk to the general public from the use of pyrethrin-containing products is minimal. Avoiding exposure is always the safest course of action. Any possible exposure risk can be reduced by following some common sense actions:

- Pay attention to notices about spraying found through newspapers, websites, automated telephone messages or distributed by municipal, county or state agencies.
- Plan your activities to limit time spent outside during times of possible pesticide treatments.
- Move your pets, their food, and water dishes inside during ULV application. Also bring clothing and children's toys inside.
- Stay away from application equipment, whether in use or not.
- Whenever possible, remain indoors with windows closed and with window air conditioners on non-vent (closed to the outside air) and window fans turned off during spraying.
- Avoid direct contact with surfaces that are still wet from pesticide spraying. Do not allow children to play in areas that have been sprayed until they have completely dried (approximately one hour).

### What is triclopyr ?

Triclopyr is a man-made herbicide used to control both broadleaf and woody plants. It was first registered in 1979 for use in forestry and it is used in both agricultural and non-agricultural settings. Certain products may have limited use for campsites, roadside applications, and some ornamental lawns. Always read the label for your product's use sites and instructions.<sup>1</sup>

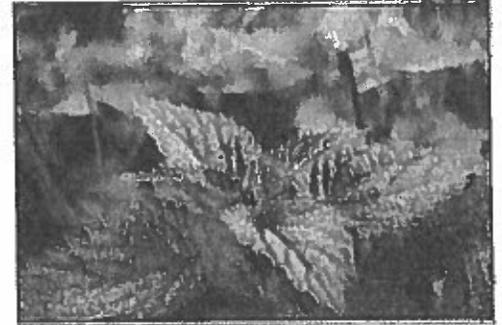


photo credit: blickpixel, pixabay

Broadleaf weeds often controlled with triclopyr include nettles, docks, brambles, and woody plants. Triclopyr is a selective herbicide, meaning it only controls certain types of plants. Grasses tend to be less sensitive to triclopyr than other weeds.<sup>2</sup>

### What are some products that contain triclopyr ?

There are over 200 products containing triclopyr.<sup>3</sup> Many of these products have other active ingredients in addition to triclopyr. Products may be ready-to-use, concentrated liquids, granules, or mixable powders. Products with triclopyr can be applied aerially or by ground application. They may be applied on tree bark, injected into tree trunks or soil, or sprayed on plant leaves.<sup>4</sup>

Products with triclopyr may have acid, salt, or ester forms. These forms tend to behave similarly in terms of toxicity and their movement in the environment.<sup>5,6</sup>

Triclopyr is commonly used on pastures and rice. It is also commonly used for turf, landscaping, and lawn care.<sup>1</sup> One type of triclopyr (a salt form) can be used on aquatic weeds.<sup>7</sup> Triclopyr is not allowed for use in certified organic production.<sup>8</sup>

### How does triclopyr work ?

Triclopyr is a systemic herbicide. It affects actively growing plants by mimicking a specific type of plant growth hormone, known as an auxin.<sup>9</sup> Plants rapidly take in triclopyr through leaves and roots. It causes uncontrolled plant growth and plant death.<sup>4</sup> After absorbing the herbicide, plants die slowly (within weeks).<sup>10</sup>

### How might I be exposed to triclopyr ?

If you are in an area during or shortly after application, you could contact it, breathe it in, or get it in your eyes. Most triclopyr incidents that were reported to the US Environmental Protection Agency (EPA) from 2000 to 2014 involved homeowners who were mixing or applying products.<sup>11</sup>

While accidents can happen, following label instructions and taking steps to minimize exposure can help reduce risks. If any exposures occur, be sure to follow the First Aid instructions on the product label carefully. For additional treatment advice, contact the Poison Control Center at 800-222-1222. If you wish to discuss a pesticide problem, please call 800-858-7378.

Triclopyr is low to moderate in developmental toxicity and moderate in reproductive toxicity. When moderate doses of triclopyr were fed to pregnant rabbits daily for 13 days, some pregnancies were lost and there were changes in fetal skeletal growth. Similar effects were seen when high doses were fed to pregnant rats for 10 days.<sup>5</sup>

In another study, two generations of male and female rats were fed triclopyr daily for 10 to 12 weeks before mating. There were fewer offspring and more lost pregnancies in both generations.<sup>5</sup>

The EPA has not tested triclopyr for endocrine disruption potential.<sup>15</sup>

### Are children more sensitive to triclopyr than adults?

There is no evidence to suggest that children are more sensitive to triclopyr than adults.<sup>5</sup> However, young children may act in ways that put them at greater risk of being exposed. For example, they may spend more time near the floor or ground. They may also be more likely to place their hands in their mouths after touching treated surfaces. Take steps to keep children away from pesticides.

### What happens to triclopyr in the environment?

Ester and salt forms of triclopyr rapidly turn into the triclopyr acid form in the environment. Most triclopyr is soluble in water, meaning it dissolves easily. However, the ester form is less soluble. Triclopyr has a low vapor pressure, meaning it is not likely to release fumes into the environment.<sup>5</sup>

Triclopyr in water breaks down faster with light. The half-life of triclopyr in water with light is around 1 day.<sup>5</sup> Without light, it is stable in water with a half-life of 142 days.<sup>4</sup>

Triclopyr breaks down relatively quickly in soils. It is mainly broken down by microbes.<sup>5</sup> The soil half-life ranges from 8 to 46 days.<sup>5,10</sup> In deeper soils with less oxygen, the half-life is longer.<sup>5</sup> Triclopyr is mobile in soils.<sup>2,5</sup> However, movement studies show that triclopyr was not measured in soils deeper than 15 to 90 centimeters (about 6 to 35 inches).<sup>4,5</sup> Its movement in soil is affected by the amount of compost and rain, among other factors.<sup>10,16</sup> Use NPIC's Herbicide Properties Tool (HPT) to find out how triclopyr can move in the environment.

As a systemic herbicide, triclopyr is absorbed through plant leaves and roots. It tends to accumulate in the growing points in a plant. The half-life in plants can vary widely with the type of plant. Barley and wheat plants broke down 85% of triclopyr within 3 days of application.<sup>10</sup> The half-life in grass was between 5 and 20 days.<sup>16</sup> The half-life in plants ranges from 3 to 24 days.<sup>2,5,16</sup>

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## Frequently Asked Questions

### **What is eastern equine encephalitis (EEE)?**

Eastern equine encephalitis (en-sef-AH-ly-tis) is a rare but serious viral infection. This disease is most common in the eastern half of the United States and is spread by the bite of an infected mosquito. EEE can affect humans, horses and some birds. The risk of getting EEE is highest from late July through early October.

### **Who gets EEE?**

Anyone can get infected with the EEE virus. The virus can affect anyone bitten by an infected mosquito.

### **How do people get EEE?**

The virus is spread by the bite of a mosquito infected with the EEE virus.

### **What are the symptoms of EEE?**

Some people infected with EEE do not become ill and may not develop symptoms. When symptoms do occur, they may be mild or severe and show up 3 to 15 days after being bitten by an infected mosquito.

- Mild symptoms such as flu-like illness with fever, headache, sore throat, stiff neck, lack of energy, muscle aches and confusion.
- Severe cases include swelling of the brain (encephalitis) which can lead to coma, convulsions and death.

### **How is EEE diagnosed?**

If a health care provider suspects EEE, samples of the patient's blood or spinal fluid will be examined.

### **Is there a treatment for people with EEE?**

There is no specific treatment for EEE. Antibiotics are not effective against viral illnesses and anti-viral drugs have not shown to be effective for treating EEE. Most treatment focuses on supportive therapy to lower fever and ease pressure on the brain and spinal cord. In severe cases, hospitalization may be needed. It is estimated that 35% of the people who survive EEE will experience mild to severe disability.

### **Can people with EEE pass the illness to others?**

The virus that causes EEE is spread only by mosquitoes. EEE is not spread between horses or from horses to people.

### **How can EEE be prevented?**

Currently, no human EEE vaccine exists; there is an EEE vaccine for horses and birds. The best way to protect yourself from getting EEE is to prevent mosquito bites.

# West Nile Virus



## Frequently Asked Questions

### **What is West Nile virus?**

West Nile virus is a viral infection that is spread by the bite of an infected mosquito. Mosquitoes get infected with the West Nile virus by feeding on infected birds. The infected mosquitoes then spread the virus by biting humans and other animals, such as horses. Identified in the United States in 1999, West Nile virus is seen most often during the summer and early fall months.

### **Who gets West Nile virus?**

Anyone can get infected with the West Nile virus. The virus can affect anyone bitten by an infected mosquito. People over the age of 50 and people with weak immune systems are at greater risk of developing severe illness.

### **How do people get West Nile virus?**

The virus is spread by the bite of a mosquito infected with the West Nile virus.

### **What are the symptoms of West Nile virus?**

Many people infected with West Nile virus do not become ill and may not develop symptoms. About 20% of infected people will develop West Nile fever. When symptoms do occur, they may be mild or severe and show up 3 to 15 days after being bitten by an infected mosquito.

- Mild symptoms include flu-like illness with fever, headache, body aches, nausea and sometimes swollen lymph glands or a skin rash on the chest, stomach and back.
- Severe symptoms include high fever, neck stiffness and swelling of the brain (encephalitis) which can lead to coma, convulsions and death. Less than 1% of infected people will develop severe symptoms.

### **How is West Nile virus diagnosed?**

If a health care provider suspects West Nile virus, samples of the patient's blood or spinal fluid will be examined.

### **What is the treatment for West Nile virus?**

There is no specific treatment for West Nile virus. Most people with West Nile fever will recover in approximately seven days. Antibiotics are not effective against viral illnesses and anti-viral drugs have not shown to be effective for treating West Nile virus. Most treatment focuses on supportive therapy to lower fever and ease pressure on the brain and spinal cord. In severe cases, hospitalization may be needed. There is no vaccine for humans.

### **Can people with West Nile virus pass the illness to others?**

The virus that causes West Nile virus is spread only by mosquitoes. West Nile virus is not spread from person to person.

In rare cases, the virus has been spread through blood transfusions, organ transplants, breastfeeding and during pregnancy from mother to baby.

### **How can West Nile virus be prevented?**

The best way to protect yourself from getting West Nile virus is to prevent mosquito bites.

**Municipalities are encouraged to share this information with all residents in their community.**

## **Fyfanon**

This Fact Sheet answers some basic questions about mosquito control products in use in your county. The Gloucester County Mosquito Control Division, along with several other resources (listed at the end of this sheet), can provide more detailed information.

### **What is Fyfanon and how is it used?**

Fyfanon is an insecticide product that is recommend for mosquito control in New Jersey by Rutgers, The State university of New Jersey. It contains the pesticide Malathion. The U.S Environmental Protection Agency (EPA) “evaluates and registers (licenses) pesticides to ensure they can be used safely”, and their current evaluation of products containing Malathion shows them to be slightly toxic with minimal potential risk to people when used properly as part of a complete mosquito control program.

Malathion is used for the control of adult mosquitoes in an integrated pest management (IPM) approach to mosquito control. IPM strategy includes habitat management, source reduction biological control and other measures to control immature mosquitoes, augmented by adult mosquito control when needed. The spraying of adult mosquitoes is called for when biting populations reach critical annoyance levels or when a disease organism is present in adult mosquitoes. A fine mist of Malathion applied during times of peak mosquito activity, since flying mosquitoes must directly contact the pesticide in order for it to be effective.

### **How can I reduce my exposure to Fyfanon?**

Risk to the public from the use of Fyfanon is minimal. Avoiding exposure is always the safest course of action, particularly for those that may be at higher risk such as pregnant women, children, the elderly, and those with chronic illnesses. Any possible exposure risk can be reduced by following some common-sense action:

**Municipalities are encouraged to share this information with all residents in their community.**

## **Duet/Aqua Duet/Duet HD**

This Fact Sheet answers some basic questions about mosquito control products in use in your county. The Gloucester County Mosquito Control Division, along with several other resources (listed at the end of this sheet), can provide more detailed information.

### **What is Duet adulticide and how is it used?**

Duet contains two pesticides called prallethrin and sumithrin, and a synergistic compound called piperonyl butoxide which increases the effectiveness of the pesticides. Aqua Duet is a water based formulation of Duet. Duet HD is a heavier formulation developed for aerial application. Prallethrin and Sumithrin are members of a category of pesticides called pyrethroids, which in turn are synthetic versions of pesticides produced by plants called pyrethrins.

Pyrethroid/piperonyl butoxide mixtures have been recommended for Ultra-Low – Volume (ULV) mosquito control in New Jersey by Rutgers, The State University of New Jersey. The U.S Environmental Protection Agency's (EPA) current evaluation considers pyrethroid-containing products to be slightly toxic with minimal potential risk to people when used properly as part of an integrated mosquito control program.

This pyrethroid-containing product is used for the control of adult mosquitoes. While habitat management and measures to control immature mosquitoes in water are preferred and most used, the spraying of adult mosquitoes is called for when biting populations reach critical levels or when a disease organism is present in adult mosquitoes. A very fine mist is sprayed into the air since flying mosquitoes must directly contact the pesticide in order for it to be effective. The combination of the two pesticides has been shown to produce what the manufacturer calls "benign agitation". In other words, mosquitoes are agitated from a resting state to a non-biting flying state where they are more vulnerable to pesticide exposure. This makes Duet Dual-Action<sup>®</sup> adulticide more effective against hard-to-control species like *Aedes Albopictus* which typically rest during the evening hours when adulticiding usually takes place.

## **How long will Duet last in the environment?**

Pyrethroids have a soil half-life of 12 days. They have an extremely low pesticide movement rating because they bind tightly to the soil. Pyrethroids are unstable in light and air. They rapidly degrade in sunlight at the soil surface and in water.

Piperonyl butoxide has a soil half-life of approximately 4 days.

## **Where can I get information on this aduaticide?**

The following are resources for more information regarding Duet and mosquito control in your area. (**unless otherwise noted, available during normal business hours**):

- For overall pesticide-specific information – 9:30am to 7:30pm

### **National Pesticide Information Center – 800-858-7378**

- For pesticide health information & possible exposure- 24 hours:

### **New Jersey Poison Information & Education System**

**800-222-1222**

- For pesticide regulations and misuse complaints:

### **NJDEP Pesticide Control Program – 609-984-6568**

- For pesticide regulation:

### **USEPA Region 2 Office of Pesticide Programs: 877-251-4575**

- For state-wide mosquito control information:

### **NJDEP Office of Mosquito Control Coordination 609-292-3649**

- For mosquito control recommendations:

### **Rutgers University, Department of Entomology:**

**848-932-9774**

**Municipalities are encouraged to share this information with all residents in their community.**

## **Anvil 2+2 (Adulticide)**

This Fact Sheet answers some basic questions about mosquito control products in use in your county. The Gloucester County Mosquito Control Division, along with several other resources (listed at the end of this sheet), can provide more detailed information.

### **What is Anvil 2 + 2 and how is it used?**

**Anvil 2+2** is an insecticide product that is recommended for Ultra-Low Volume mosquito control in New Jersey by Rutgers, The State University of New Jersey. It contains the pesticides called **Sumithrin and Piperonyl Butoxide (PBO)**. The U.S. Environmental Protection Agency's (EPA) current evaluation considers **Sumithrin and Piperonyl Butoxide (PBO)** containing products to be slightly toxic with minimal potential risk to people when used properly as part of a complete mosquito control program. **Anvil 2+2** is used for the control of adult mosquitoes. While habitat management and measures to control immature mosquitoes in the water are preferred and most used, the spraying of adult mosquitoes is called for when biting populations reach critical levels or when a disease organism is present in adult mosquitoes. A very fine mist is sprayed into the air since flying mosquitoes must directly contact the pesticide in order for it to be effective.

### **How can I reduce my exposure to Anvil 2+2?**

Risk to the general public from the use of **Anvil 2+2** is minimal. Avoiding exposure is always the safest course of action, particularly for populations that may be at higher risk such as pregnant women, children, the elderly and those with chronic illnesses. Any possible exposure risk can be reduced by following some common-sense action:

- Pay attention to notices about spraying found through newspapers, websites, automated telephone messages or distributed by municipal, county or state agencies.

- For pesticide health information & possible exposure- 24 hours:

**New Jersey Poison Information & Education System**

**800-222-1222**

- For pesticide regulations and misuse complaints:

**NJDEP Pesticide Control Program – 609-984-6568**

- For pesticide regulation:

**USEPA Region 2 Office of Pesticide Programs: 877-251-4575**

- For state-wide mosquito control information:

**NJDEP Office of Mosquito Control Coordination 609-292-3649**

- For mosquito control recommendations:

**Rutgers University, Department of Entomology:**

**848-932-9774**

- For local Mosquito control information:

**Gloucester County Mosquito Control Division: 856-307-6400**

- For Health related pesticide information:

**The Gloucester County Health Department: 856-218-4101**

**Municipalities are encouraged to share this information with all residents in their community.**

## **Aqua-Reslin (Adulticide)**

This Fact Sheet answers some basic questions about mosquito control products in use in your county. The Gloucester County Mosquito Control Division, along with several other resources (listed at the end of this sheet), can provide more detailed information.

### **What is Aqua-Reslin and how is it used?**

**Aqua-Reslin** is an insecticide product that is recommended for Ultra-Low Volume mosquito control in New Jersey by Rutgers, The State University of New Jersey. It contains the pesticides called **Permethrin and Piperonyl Butoxide (PBO)**. The U.S. Environmental Protection Agency's (EPA) current evaluation considers **Permethrin and Piperonyl Butoxide (PBO)** containing products to be slightly toxic with minimal potential risk to people when used properly as part of a complete mosquito control program. **Aqua-Reslin** is used for the control of adult mosquitoes. While habitat management and measures to control immature mosquitoes in the water are preferred and most used, the spraying of adult mosquitoes is called for when biting populations reach critical levels or when a disease organism is present in adult mosquitoes. A very fine mist is sprayed into the air since flying mosquitoes must directly contact the pesticide in order for it to be effective.

### **How can I reduce my exposure to Aqua-Reslin?**

Risk to the general public from the use of **Aqua-Reslin** is minimal. Avoiding exposure is always the safest course of action, particularly for populations that may be at higher risk such as pregnant women, children, the elderly and those with chronic illnesses. Any possible exposure risk can be reduced by following some common-sense action:

- Pay attention to notices about spraying found through newspapers, websites, automated telephone messages or distributed by municipal, county or state agencies.

- For pesticide health information & possible exposure- 24 hours:

**New Jersey Poison Information & Education System**

**800-222-1222**

- For pesticide regulations and misuse complaints:

**NJDEP Pesticide Control Program – 609-984-6568**

- For pesticide regulation:

**USEPA Region 2 Office of Pesticide Programs: 877-251-4575**

- For state-wide mosquito control information:

**NJDEP Office of Mosquito Control Coordination 609-292-3649**

- For mosquito control recommendations:

**Rutgers University, Department of Entomology:**

**848-932-9774**

- For local Mosquito control information:

**Gloucester County Mosquito Control Division: 856-307-6400**

- For Health related pesticide information:

**The Gloucester County Health Department: 856-218-4101**

**Municipalities are encouraged to share this information with all residents in their community.**

## **Altosid (Larvicide)**

This Fact Sheet answers some basic questions about mosquito control products in use in your county. The Gloucester County Mosquito Control Division, along with several other resources (listed at the end of this sheet), can provide more detailed information.

### **What is Altosid and how is it used?**

**Altosid** is an insecticide product that is recommended for mosquito control in New Jersey by Rutgers, The State University of New Jersey. It contains the pesticide called **Methoprene**. The U.S Environmental Protection Agency's (EPA) current evaluation considers **Methoprene**-containing products to be very slightly toxic with minimal potential risk to people when used properly as part of a complete mosquito control program. **Altosid** is used to prevent mosquitoes from hatching in lakes, ponds and other bodies of water. It acts on the larval or immature stage of the mosquito in water immediately before the flying mosquito emerges. **Altosid** is part of a integrated pest management (IPM) approach to mosquito control.

### **How can I reduce my exposure to Altosid?**

Risk to the general public from the use of **Altosid** is minimal. Avoiding exposure is always the safest course of action, particularly for populations that may be at higher risk such as pregnant women, children, the elderly and those with chronic illnesses. Any possible exposure risk can be reduced by following some common-sense action:

- Pay attention to notices about spraying found through newspapers, websites, automated telephone messages or distributed by municipal, county or state agencies.
- Plan your activities to limit time spent outside during times of possible pesticide treatments, usually between sunset and sunrise.

**New Jersey Poison Information & Education System**

**800-222-1222**

- For pesticide regulations and misuse complaints:

**NJDEP Pesticide Control Program – 609-984-6568**

- For pesticide regulation:

**USEPA Region 2 Office of Pesticide Programs: 877-251-4575**

- For state-wide mosquito control information:

**NJDEP Office of Mosquito Control Coordination 609-292-3649**

- For mosquito control recommendations:

**Rutgers University, Department of Entomology:**

**848-932-9774**

- For local Mosquito control information:

**Gloucester County Mosquito Control Division: 856-307-6400**

- For Health related pesticide information:

**The Gloucester County Health Department: 856-218-4101**

**Municipalities are encouraged to share this information with all residents in their community.**

## **BVA2 Larvicide Oil**

This Fact Sheet answers some basic questions about mosquito control products in use in your county. The Gloucester County Mosquito Control Division, along with several other resources (listed at the end of this sheet), can provide more detailed information.

### **What is BVA2 Larvicide oil and how is it used?**

**BVA2** is an insecticide product that is recommended for mosquito control in New Jersey by Rutgers, The State University of New Jersey. It contains the pesticides called **mineral oil**. The U.S. Environmental Protection Agency's (EPA) current evaluation considers **mineral-oil products** containing products to be slightly toxic with minimal potential risk to people when used properly as part of a complete mosquito control program. **BVA2 is used to prevent mosquitoes from hatching in lakes, ponds, and other bodies of standing water. It acts on the pupae or immature stage of the mosquito in water immediately before the flying mosquito emerges. It is a part of an integrated pest management (IPM) approach to mosquito control. IPM strategy includes habitat management, source reduction, biological control and other measures to control immature mosquitoes.**

### **How can I reduce my exposure to BVA2 Larvicide Oil?**

Risk to the general public from the use of **BVA2** is minimal. Avoiding exposure is always the safest course of action, particularly for populations that may be at higher risk such as pregnant women, children, the elderly and those with chronic illnesses. Any possible exposure risk can be reduced by following some common-sense action:

- Pay attention to notices about spraying found through newspapers, websites, automated telephone messages or distributed by municipal, county or state agencies.

**New Jersey Poison Information & Education System**

**800-222-1222**

- For pesticide regulations and misuse complaints:

**NJDEP Pesticide Control Program – 609-984-6568**

- For pesticide regulation:

**USEPA Region 2 Office of Pesticide Programs: 877-251-4575**

- For state-wide mosquito control information:

**NJDEP Office of Mosquito Control Coordination 609-292-3649**

- For mosquito control recommendations:

**Rutgers University, Department of Entomology:**

**848-932-9774**

- For local Mosquito control information:

**Gloucester County Mosquito Control Division: 856-307-6400**

- For Health related pesticide information:

**The Gloucester County Health Department: 856-218-4101**

**Municipalities are encouraged to share this information with all residents in their community.**

## **Natular® Larvicide**

This Fact Sheet answers some basic questions about mosquito control products in use in your county. The Gloucester County Mosquito Control Division, along with several other resources (listed at the end of this sheet), can provide more detailed information.

### **What is Natular Larvicide and how is it used?**

**Natular is a bacterial larvicide that is used for mosquito control in New Jersey.** It contains the active ingredient “**Spinosad**”. Spinosad is made up of the complex organic compounds SpinosynA and Spinosyn D, which are created by soil microbes. The U.S Environmental Protection Agency’s (EPA) current evaluation considers **Spinosad** containing products to be slightly toxic with minimal potential risk to people when used properly as part of a complete mosquito control program.

**Natular contains parts of a naturally occurring soil bacterium. When mosquito larvae eat the spores, toxins are released by the mosquito’s stomach fluids, which in turn cause the larvae to die.** It is a part of an integrated pest management (IPM) approach to mosquito control. IPM strategy includes habitat management, source reduction, biological control and other measures to control immature mosquitoes.

### **How can I reduce my exposure to Natular Larvicide?**

Risk to the general public from the use of **Natular** is very minimal. The organic compounds that are lethal to mosquitoes are harmless to mammals. Avoiding exposure is always the safest course of action, particularly for populations that may be at higher risk such as pregnant women, children, the elderly and those with chronic illnesses. Any possible exposure risk can be reduced by following some common-sense action:

- Pay attention to notices about spraying found through newspapers, websites, automated telephone messages or distributed by municipal, county or state agencies.

**National Pesticide Information Center – 800-858-7378**

- For pesticide health information & possible exposure- 24 hours:

**New Jersey Poison Information & Education System**

**800-222-1222**

- For pesticide regulations and misuse complaints:

**NJDEP Pesticide Control Program – 609-984-6568**

- For pesticide regulation:

**USEPA Region 2 Office of Pesticide Programs: 877-251-4575**

- For state-wide mosquito control information:

**NJDEP Office of Mosquito Control Coordination 609-292-3649**

- For mosquito control recommendations:

**Rutgers University, Department of Entomology:**

**848-932-9774**

- For local Mosquito control information:

**Gloucester County Mosquito Control Division: 856-307-6400**

- For Health related pesticide information:

**The Gloucester County Health Department: 856-218-4101**

**Municipalities are encouraged to share this information with all residents in their community.**

## **Vectolex® Larvicide**

This Fact Sheet answers some basic questions about mosquito control products in use in your county. The Gloucester County Mosquito Control Division, along with several other resources (listed at the end of this sheet), can provide more detailed information.

### **What is Vectolex Larvicide and how is it used?**

**Vectolex** is an insecticide product that is recommended for mosquito control in New Jersey by Rutgers, The State University of New Jersey. It contains the pesticide called "**Bacillus Sphaericus (BS)**". The U.S Environmental Protection Agency's (EPA) current evaluation considers BS-containing products to be slightly toxic with minimal potential risk to people when used properly as part of a complete mosquito control program.

**Vectolex** is used to prevent mosquitoes from hatching in lakes, ponds and other bodies of water. It acts on the larval or immature stage of mosquito in water immediately before flying mosquito emerges. It is a part of an integrated pest management (IPM) approach to mosquito control. IPM strategy includes habitat management, source reduction, biological control and other measures to control immature mosquitoes on order to lessen the need to spray for adult mosquitoes.

### **How can I reduce my exposure to Vectolex Larvicide?**

Risk to the general public from the use of **Vectolex** is very minimal. Avoiding exposure is always the safest course of action, particularly for populations that may be at higher risk such as pregnant women, children, the elderly and those with chronic illnesses. Any possible exposure risk can be reduced by following some common-sense action:

- Pay attention to notices about spraying found through newspapers, websites, automated telephone messages or distributed by municipal, county or state agencies.

- For pesticide health information & possible exposure- 24 hours:

**New Jersey Poison Information & Education System**

**800-222-1222**

- For pesticide regulations and misuse complaints:

**NJDEP Pesticide Control Program – 609-984-6568**

- For pesticide regulation:

**USEPA Region 2 Office of Pesticide Programs: 877-251-4575**

- For state-wide mosquito control information:

**NJDEP Office of Mosquito Control Coordination 609-292-3649**

- For mosquito control recommendations:

**Rutgers University, Department of Entomology:**

**848-932-9774**

- For local Mosquito control information:

**Gloucester County Mosquito Control Division: 856-307-6400**

- For Health related pesticide information:

**The Gloucester County Health Department: 856-218-4101**

**Municipalities are encouraged to share this information with all residents in their community.**

## **Vectobac Larvicide**

This Fact Sheet answers some basic questions about mosquito control products in use in your county. The Gloucester County Mosquito Control Division, along with several other resources (listed at the end of this sheet), can provide more detailed information.

### **What is Vectobac Larvicide and how is it used?**

**Vectobac larvicide** is an insecticide that is recommended for mosquito control in New Jersey by Rutgers, The State university of New Jersey. It contains the pesticide **Bacillus Thuringiensis, subspecies israelensis (BTI)** The U.S Environmental Protection Agency (EPA) current evaluation considers **Bti**-containing products to be slightly toxic with minimal potential risk to people when used properly as part of a complete mosquito control program.

**Vectobac Larvicide** contains parts of a naturally occurring soil bacterium. When mosquito larvae eat the spores, toxins are released by the mosquito's stomach fluids, which in turn cause the larva to die.

**Vectobac Larvicide** is used to prevent mosquitoes from hatching in lakes, ponds, and other bodies of water. It acts on the pupa, or immature stage, of the mosquito in water immediately before the flying mosquitoes emerges. **Vectobac Larvicide** is part of an integrated pest management (IPM) approach to mosquito control. IPM strategy includes habitat management, source reduction biological control and other measures to control immature mosquitoes, augmented by adult mosquito control when needed. The spraying of adult mosquitoes is called for when biting populations reach critical annoyance levels or when a disease organism is present in adult mosquitoes.

### **How can I reduce my exposure to Vectobac Larvicide?**

Risk to the public from the use of **Vectobac Larvicide** is minimal. Because of the very small amounts of active ingredients released per acre. Avoiding exposure is

The following are resources for more information regarding Duet and mosquito control in your area. (unless otherwise noted, available during normal business hours):

- For overall pesticide-specific information – 9:30am to 7:30pm

**National Pesticide Information Center – 800-858-7378**

- For pesticide health information & possible exposure- 24 hours:

**New Jersey Poison Information & Education System**

**800-222-1222**

- For pesticide regulations and misuse complaints:

**NJDEP Pesticide Control Program – 609-984-6568**

- For pesticide regulation:

**USEPA Region 2 Office of Pesticide Programs: 877-251-4575**

- For state-wide mosquito control information:

**NJDEP Office of Mosquito Control Coordination 609-292-3649**

- For mosquito control recommendations:

**Rutgers University, Department of Entomology:**

**848-932-9774**

- For local Mosquito control information:

**Gloucester County Mosquito Control Division: 856-307-6400**

- For Health related pesticide information:

**The Gloucester County Health Department: 856-218-4101**

**Municipalities are encouraged to share this information with all residents in their community.**

## **PermaSease® 4-4 (Adulticide)**

This Fact Sheet answers some basic questions about mosquito control products in use in your county. The Gloucester County Mosquito Control Division, along with several other resources (listed at the end of this sheet), can provide more detailed information.

### **What is PermaSease 4-4 and how is it used?**

**PermaSease 4-4** is an insecticide product that is recommended for Ultra-Low Volume mosquito control in New Jersey. It contains the pesticides called **Permethrin and Piperonyl Butoxide (PBO)**. The U.S Environmental Protection Agency's (EPA) current evaluation considers **Permethrin and Piperonyl Butoxide (PBO)** containing products to be slightly toxic with minimal potential risk to people when used properly as part of a complete mosquito control program. **Piperonyl Butoxide (PBO)** is a synergist and is not designed to kill insects on its own. When PBO is added to a pyrethroid, like permethrin, it decreases the ability of the mosquito to detoxify the permethrin, which can increase the efficacy of the insecticide. **PermaSease 4-4** is used for the control of adult mosquitoes. While habitat management and measures to control immature mosquitoes in the water are preferred and most used, the spraying of adult mosquitoes is called for when biting populations reach critical levels or when a disease organism is present in adult mosquitoes. A very fine mist is sprayed into the air since flying mosquitoes must directly contact the pesticide in order for it to be effective.

### **How can I reduce my exposure to PermaSease 4-4?**

Risk to the general public from the use of **PermaSease 4-4** is minimal. Avoiding exposure is always the safest course of action, particularly for populations that may be at higher risk such as pregnant women, children, the elderly and those with chronic illnesses. Any possible exposure risk can be reduced by following some common-sense action:

The following are resources for more information regarding Duet and mosquito control in your area. (unless otherwise noted, available during normal business hours):

- For overall pesticide-specific information – 9:30am to 7:30pm

**National Pesticide Information Center – 800-858-7378**

- For pesticide health information & possible exposure- 24 hours:

**New Jersey Poison Information & Education System**

**800-222-1222**

- For pesticide regulations and misuse complaints:

**NJDEP Pesticide Control Program – 609-984-6568**

- For pesticide regulation:

**USEPA Region 2 Office of Pesticide Programs: 877-251-4575**

- For state-wide mosquito control information:

**NJDEP Office of Mosquito Control Coordination 609-292-3649**

- For mosquito control recommendations:

**Rutgers University, Department of Entomology:**

**848-932-9774**

- For local Mosquito control information:

**Gloucester County Mosquito Control Division: 856-307-6400**

- For Health related pesticide information:

**The Gloucester County Health Department: 856-218-4101**

**Municipalities are encouraged to share this information with all residents in their community.**

## **PermaSease® 3-15 (Adulticide)**

This Fact Sheet answers some basic questions about mosquito control products in use in your county. The Gloucester County Mosquito Control Division, along with several other resources (listed at the end of this sheet), can provide more detailed information.

### **What is PermaSease 3-15 and how is it used?**

**PermaSease 3-15** is an insecticide product that is recommended for Ultra-Low Volume mosquito control in New Jersey. It contains the pesticides called **Permethrin and Piperonyl Butoxide (PBO)**. The U.S Environmental Protection Agency's (EPA) current evaluation considers **Permethrin and Piperonyl Butoxide (PBO)** containing products to be slightly toxic with minimal potential risk to people when used properly as part of a complete mosquito control program. **Piperonyl Butoxide (PBO)** is a synergist and is not designed to kill insects on its own. When PBO is added to a pyrethroid, like permethrin, it decreases the ability of the mosquito to detoxify the permethrin, which can increase the efficacy of the insecticide. **PermaSease 3-15** is used for the control of adult mosquitoes. While habitat management and measures to control immature mosquitoes in the water are preferred and most used, the spraying of adult mosquitoes is called for when biting populations reach critical levels or when a disease organism is present in adult mosquitoes. A very fine mist is sprayed into the air since flying mosquitoes must directly contact the pesticide in order for it to be effective.

### **How can I reduce my exposure to PermaSease 3-15?**

Risk to the general public from the use of **PermaSease 3-15** is minimal. Avoiding exposure is always the safest course of action, particularly for populations that may be at higher risk such as pregnant women, children, the elderly and those with chronic illnesses. Any possible exposure risk can be reduced by following some common-sense action:

The following are resources for more information regarding Duet and mosquito control in your area. (unless otherwise noted, available during normal business hours):

- For overall pesticide-specific information – 9:30am to 7:30pm

**National Pesticide Information Center – 800-858-7378**

- For pesticide health information & possible exposure- 24 hours:

**New Jersey Poison Information & Education System**

**800-222-1222**

- For pesticide regulations and misuse complaints:

**NJDEP Pesticide Control Program – 609-984-6568**

- For pesticide regulation:

**USEPA Region 2 Office of Pesticide Programs: 877-251-4575**

- For state-wide mosquito control information:

**NJDEP Office of Mosquito Control Coordination 609-292-3649**

- For mosquito control recommendations:

**Rutgers University, Department of Entomology:**

**848-932-9774**

- For local Mosquito control information:

**Gloucester County Mosquito Control Division: 856-307-6400**

- For Health related pesticide information:

**The Gloucester County Health Department: 856-218-4101**

**Municipalities are encouraged to share this information with all residents in their community.**

## **Fourstar Larvicide**

This Fact Sheet answers some basic questions about mosquito control products in use in your county. The Gloucester County Mosquito Control Division, along with several other resources (listed at the end of this sheet), can provide more detailed information.

### **What is Fourstar Larvicide and how is it used?**

**Fourstar Larvicide** is an insecticide that is recommended for mosquito control in New Jersey by Rutgers, The State university of New Jersey. It contains the pesticide **Bacillus Sphaericus** and **Bacillus Thuringiensis, subspecies israelensis**.

The U.S Environmental Protection Agency (EPA) current evaluation considers **Bacillus Sphaericus** and **Bacillus Thuringiensis, subspecies israelensis** containing products to be slightly toxic with minimal potential risk to people when used properly as part of a complete mosquito control program.

**Fourstar Larvicide** is used to prevent mosquitoes from hatching in lakes, ponds, and other bodies of water. It acts on the pupa, or immature stage, of the mosquito in water immediately before the flying mosquitoes emerges. **Fourstar Larvicide** is part of an integrated pest management (IPM) approach to mosquito control. IPM strategy includes habitat management, source reduction biological control and other measures to control immature mosquitoes, augmented by adult mosquito control when needed. The spraying of adult mosquitoes is called for when biting populations reach critical annoyance levels or when a disease organism is present in adult mosquitoes.

### **How can I reduce my exposure to Fourstar Larvicide?**

Risk to the public from the use of **Fourstar Larvicide** is minimal. Because of the very small amounts of active ingredients released per acre. Avoiding exposure is always the safest course of action, particularly for those that may be at higher risk such as pregnant women, children, the elderly, and those with chronic illnesses.

The following are resources for more information regarding Duet and mosquito control in your area. (unless otherwise noted, available during normal business hours):

- For overall pesticide-specific information – 9:30am to 7:30pm

**National Pesticide Information Center – 800-858-7378**

- For pesticide health information & possible exposure- 24 hours:

**New Jersey Poison Information & Education System**

**800-222-1222**

- For pesticide regulations and misuse complaints:

**NJDEP Pesticide Control Program – 609-984-6568**

- For pesticide regulation:

**USEPA Region 2 Office of Pesticide Programs: 877-251-4575**

- For state-wide mosquito control information:

**NJDEP Office of Mosquito Control Coordination 609-292-3649**

- For mosquito control recommendations:

**Rutgers University, Department of Entomology:**

**848-932-9774**

- For local Mosquito control information:

**Gloucester County Mosquito Control Division: 856-307-6400**

- For Health related pesticide information:

**The Gloucester County Health Department: 856-218-4101**

**Municipalities are encouraged to share this information with all residents in their community.**

## **Zenivex**

This Fact Sheet answers some basic questions about mosquito control products in use in your county. The Gloucester County Mosquito Control Division, along with several other resources (listed at the end of this sheet), can provide more detailed information.

### **What is Etofenprox and how is it used?**

Zenivex contains a pesticide called Etofenprox, a member of the category of pesticides called non-ester pyrethroids, which are synthetic versions of pesticides produced by plants called pyrethrins. Traditional pyrethroid/piperonyl butoxide mixtures are recommended for Ultra-Low-Volume (ULV) mosquito control in New Jersey by Rutgers, The State University of New Jersey. Zenivex is a non-ester pyrethroid, and therefore does not require a synergist such as piperonyl butoxide. The U.S. Environmental Protection Agency (EPA) has classified Etofenprox as a reduced risk molecule. It poses a low risk to human health and the environment when used properly as part of an integrated mosquito control program. As formulated in Zenivex adulticide, Etofenprox is considered a non-carcinogen, non-teratogen and non-mutagen.

This non-ester pyrethroid-containing product is used for the control of adult mosquitoes in an integrated pest management (IPM) approach to mosquito control. IPM strategy includes habitat management, source reduction biological control and other measures to control immature mosquitoes, augmented by adult mosquito control when needed. The spraying of adult mosquitoes is called for when biting populations reach critical annoyance levels or when a disease organism is present in adult mosquitoes. A fine mist of Malathion applied during times of peak mosquito activity, since flying mosquitoes must directly contact the pesticide in order for it to be effective.

### **How can I reduce my exposure to Etofenprox?**

## **Where can I get information on this adulticide?**

The following are resources for more information regarding Duet and mosquito control in your area. (unless otherwise noted, available during normal business hours):

- For overall pesticide-specific information – 9:30am to 7:30pm

### **National Pesticide Information Center – 800-858-7378**

- For pesticide health information & possible exposure- 24 hours:

### **New Jersey Poison Information & Education System**

**800-222-1222**

- For pesticide regulations and misuse complaints:

### **NJDEP Pesticide Control Program – 609-984-6568**

- For pesticide regulation:

### **USEPA Region 2 Office of Pesticide Programs: 877-251-4575**

- For state-wide mosquito control information:

### **NJDEP Office of Mosquito Control Coordination 609-292-3649**

- For mosquito control recommendations:

### **Rutgers University, Department of Entomology:**

**848-932-9774**

- For local Mosquito control information:

### **Gloucester County Mosquito Control Division: 856-307-6400**

- For Health related pesticide information:

### **The Gloucester County Health Department: 856-218-4101**