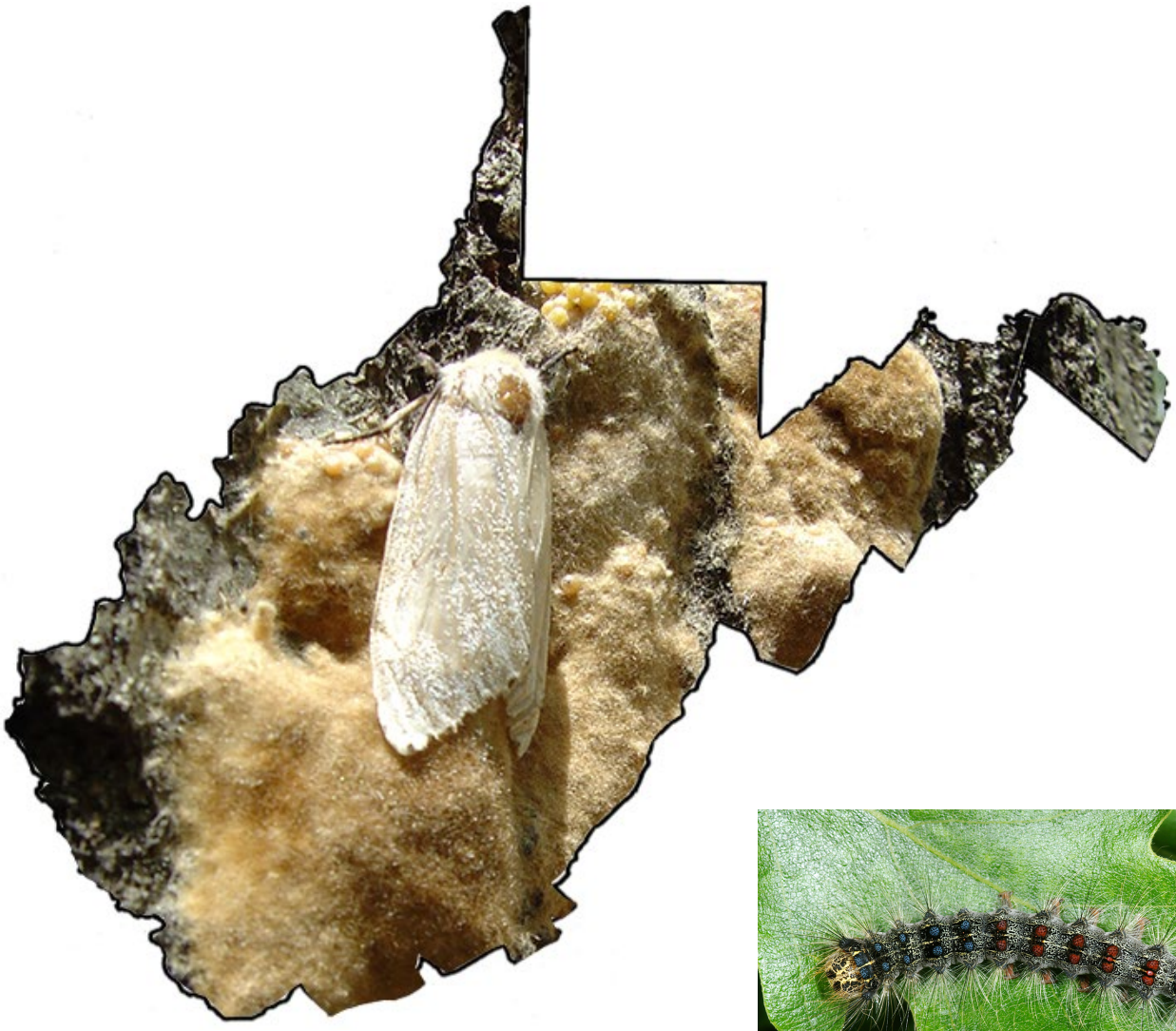
# The West Virginia Department of Agriculture

# Spongy Moth (*Lymantria dispar*)

# State-County-Landowner Cooperative Suppression Program



The spongy moth (Lymantria dispar), previously known as the gypsy moth, is one of West Virginia's most damaging insect pests to ever invade West Virginia's forests. The first adult spongy moth males were trapped in West Virginia in 1972, and the first caterpillars were found in 1978. Since then, this destructive insect has continued to spread and has created a need for a spongy moth cooperative suppression program. This brochure is designed to answer commonly asked questions and provide information to landowners about this program.

## HOW SERIOUS IS THE SPONGY MOTH PROBLEM?

Severe economic loss of valuable timber, negative impacts on outdoor recreational opportunities in areas of high infestation, adverse effects on wildlife through food loss and changes in habitat, and the destruction of our beautiful, forested communities are just some of the detrimental results of the spongy moth. In addition, some individuals may experience health related problems if they encounter large quantities of spongy moth caterpillars which could result in an allergic reaction.

Repeated heavy defoliation by this insect kills trees. Spruce, pine, and hemlocks die after just a single heavy defoliation and hardwood tree mortality, after two successive years of defoliation, can reach as high as 80%. Oaks and oak-hickory type trees are preferred by this insect and these trees make up about 77% of West Virginia's woodlands.

Studies by the West Virginia Department of Agriculture and the West Virginia Division of Forestry confirm a 25%

mortality rate after one year of heavy defoliation can be expected in timber stands if this insect pest is left untreated.

## WHERE IS THE SPONGY MOTH INFESTATION CURRENTLY?

Spongy moth county locations are regulated by the United States Department of Agriculture Spongy Moth Quarantine (7CFR 301.45) and the West Virginia Department of Agriculture Spongy Moth Quarantine. The West Virginia counties are Barbour, Berkeley, Braxton, Brooke, Calhoun, Doddridge, Fayette, Gilmer, Grant, Greenbrier, Hampshire, Hancock, Hardy, Harrison, Jackson, Jefferson, Lewis, Marion, Marshall, McDowell, Mercer, Mineral, Monongalia, Monroe, Morgan, Nicholas, Ohio, Pendleton, Pleasants, Pocahontas, Preston, Raleigh, Ritchie, Summers, Taylor, Tucker, Tyler, Upshur, Webster, Wetzel, Wirt, Wood, and Wyoming.

## WHAT IS THE SPONGY MOTH COOPERATIVE SUPRESSION PROGRAM?

It is a cooperative regional suppression program between landowners, the West Virginia Department of Agriculture, West Virginia Division of Forestry, local county commissions, West Virginia University (WVU) Cooperative Extension Service, and the United States Department of Agriculture Forest Service (USDA-FS). Aerial treatments are used to minimize the damage to forests and reduce the impact of the spongy moth in future years. Treatments are aimed at suppression and will not be done with the intent of eradicating this pest. The spongy moth treatments currently available are **(BTK) Bacillus turingiensis** or **Mimic® (Tebufenozide)**. Landowners may request the treatment they prefer. However, final approval for use will depend on the site evaluation conducted by the WVDA. The evaluation will determine if an area meets the criteria set forth on the pesticide label and other possible restrictions.

## HOW DO I KNOW IF MY LAND HAS A SPONGY MOTH PROBLEM AND I NEED TO PARTICIPATE?

Generally, forest land being managed for timber should have a concentration of 500 egg masses per acre to be considered for treatment. However, USDA-FS research shows that the concentration could go as high as 1,000 – 1,200 egg masses per acre and still obtain adequate timber management protection. Other factors like whether the population is building or declining and/or the size of the egg masses must be taken into consideration before the final decision concerning treatment is made.

The WVDA will conduct an egg mass survey on your property upon request and provide other information about the spongy moth population in your area.

Historically, there have been a number of areas that did not conform to the general guidelines and yet large areas were defoliated where egg mass counts were below 500 masses per acre. This simply serves to demonstrate the unpredictability of this insect when we try to apply these general guidelines across the entire infested area.

In wooded developments or residential areas where the nuisance factor of the insect is significant, 500 egg masses per acre are required but consideration will also be given to treating areas when the potential for large numbers of windblown caterpillars exists. Potential for windblown caterpillars is defined as a count greater than 1,000 egg masses per acre within 1 mile of the proposed treatment block. There is a higher risk of this happening when high egg mass

densities occur at higher elevations or to the south and west of the proposed treatment blocks. Land proposed for treatment should not pose a serious safety risk to aerial spraying. If electrical transmission lines, communication towers, etc. present a hazard, spray blocks may have to be modified or dropped. Spray blocks must contain a minimum of 50 contiguous acres of trees with no omits. This minimum acreage is necessary to maintain the current low cost of the program. Adjacent property owners are encouraged to go in together to meet this minimum requirement, as to derive the maximum benefit from the treatment program. No billing will be made, or egg mass surveys conducted on blocks less than 50 acres. Landowners and **housing developments*** must sign up as a single unit on one application with a single coordinator to form spray blocks with the minimum of 50 acres. Blocks of less than 100 acres can have no more than 25 acres of exclusion or non-spray area. The minimum exclusion size is 10 acres.

***Forested resiential development and Homeowners Associations (HOA) must provide a complete listing of all property owners who want to opt in or opt out of the treatment program and the block coordinator must also include this information on the map submitted. The WVDA will determine if the property owners who do not want to participate can be logistically removed from the proposed treatment area, this may potentially disqualify the block from the program. All lot owners objecting to treatment will be buffered an additional 150 feet outside their property boundaries. The block coordinator for the treatment area should contact property owners to discuss treatment material as the entire block will need to be treated with either BTK or Mimic®.**

## HOW CAN I SIGNUP?

Application forms and brochures are available at the WVDA's Plant Industries Division website at: https://agriculture.wv.gov/divisions/plant-industries/forest-health-protection/, or at your local WVU Extension Office, and at the WVDA offices in Charleston (304-558-2212) or New Creek office (304-788-1066). **A non-refundable survey deposit of $5.00 per acre ($2,000.00 maximum) must be submitted with the application.** The application and survey deposit must be submitted by **August 31, 2024**. If you need any further assistance in marking the boundaries of your land, contact your local WVDA Forest Health Protection Specialist to arrange an appointment. The property owner is responsible for providing an original 7.5-minute topographic map, or aerial photo with the property boundaries marked on it, or an ESRI shape file projected in UTM Zone 17-Nad 83 is also acceptable. A WVDA Forest Health Protection Specialist will visit your proposed treatment site to determine if the property qualifies. The area selected for treatment will be **squared off** to establish a manageable treatment block, which will allow for the most effective areal treatment. Some of your land may not be treated after the boundary is delineated and the area surveyed.

You will be notified by mail before **December 1, 2024,** if you qualify for participation in the suppression program based on the spongy moth population density and the site quality. A **non-refundable treatment deposit invoice** will be included in the mailing and must be paid by **December 20, 2024.**

Keys or combinations for locks must be provided with the application at the time of sign up in order to facilitate the egg mass survey evaluation.

Your application and survey deposit (made payable to the WVDA) must be mailed to:

**West Virginia Department of Agriculture**
**Plant Industries Division**
**1900 Kanawha Blvd., East**
**Charleston, WV 25305**

**Your final decision to participate in the spring treatment program must be confirmed by signing a contract, signature map, and submitting them with a non-refundable treatment deposit to the WVDA.**

## HOW MUCH WILL IT COST?

Treatment costs vary from year to year depending on the aerial contract cost (i.e. fuel, pesticide, and spray application). Contact your local WVDA representative for the previous years cost and the current years estimate cost.

The **non-refundable $5.00 per acre** survey deposit will be applied to the treatment cost if your land qualifies.

The WVDA has received cost sharing dollars in the past that have paid for approximately 50% of the actual treatment cost. If the cost share funds happen to not be available, due to the lack of sufficient U.S. congressional budget allocation, landowners should be **prepared to pay the total cost of aerial treatment**. The estimated maximum cost will be on the deposit invoice. Unfortunately it is often March before WVDA is advised of the cost share amount that we will receive. A final invoice will be mailed at the time with the remaining balance which will need to be paid before the treatment will be conducted. The WVDA should be able to secure a cheaper price compared to private landowners contracting independently.

## IS SPRAYING AN EFFECTIVE OPTION?

Yes! Carefully selected treatment materials like **BTK** and **Mimic®** are effective in preventing defoliation and the rapid spread of the spongy moth. Outlined below are the treatment options available.

**BTK (Bacillus thuringiensis var. kurstaki)**

This bacterium is commonly found in forest soils worldwide and has become one of the most valuable biological pesticides used in a variety of agricultural, forestry, and urban pests. While it is highly toxic to the target pest, it is very safe to humans and animals.

**Mimic® (Tebufenozide)**

Tebufenozide is a pesticide that is classified as an insect growth regulator. This means that once exposed to this pesticide the caterpillars are unable to successfully molt and grow, which will inhibit them from reaching maturity and reproducing. It can be applied via air or ground and is successful on all population densities.

## HOW CAN I GET MORE INFORMATION?

For more information on the WVDA spongy moth treatment program contact either WVDA Assistant Director, Quentin "Butch" Sayers or Gypsy Moth Program Coordinator G. Scott Hoffman at 304-788-1066. Additional program information can be obtained from the WVDA location in Charleston 304-558-2212 , New Creek 304-788-1066, or your local county extension agent.

**West Virginia Department of Agriculture**
Kent A. Leonhardt, Commissioner
Joseph L. Hatton, Deputy Commissioner

***SPONGY MOTH (LYMANTRIA DISPAR) COOPERATIVE SUPPRESSION PROGRAM***
***Egg Mass Survey Request Application _____COUNTY***

***Instructions*:** Proposed spray blocks must be a minimum of ***50 contiguous acres***. Attach a copy of a 7.5- minute topographic map with the ***property boundary clearly marked*** on it. A plat map should be provided to verify boundaries. A Farm Service Agency aerial photo can be used to mark fields that need to be omitted. An ESRI shape file, projected in UTM Zone 17, NAD 83 Datum, can be provided by the forest industry. ***Special Note: Homeowners Associations must provide a complete listing and map of all property owners participating and not wanting to participate - objecting within the HOA. Please see brochure.***

**A non-refundable survey deposit of $5.00 per acre is required to participate ($2,000.00 maximum).** Use one application for each separate block of 50 acres or more.

Fill out the information below and on reverse and return, along with your property boundary map and your $5.00 per acre survey deposit to: **West Virginia Department of Agriculture, Plant Industries Division, 1900 Kanawha Blvd., East, Charleston, WV 25305**

**Applicant Information**

_____
Applicants Name

_____
Development or Business Name

_____ (____)_____ (____)_____
Applicant's Mailing Address Home Phone Work Phone

_____ (____)_____ (____)_____
City State Zip Cell Phone Fax

_____
E-mail address

**Local Contact Information**

_____ (____)_____ (____)_____
Local Contact for Absentee Landowner Home Phone Work Phone

_____ (____)_____ (____)_____
Local Contact's Mailing Address Cell Phone Fax

_____
City State Zip

_____
E-mail address

**Remarks**_____

_____

**Applicant's Signature:** _____ **Date:** _____

**APPLICANT, PLEASE COMPLETE SITE-SPECIFIC INFORMATION ON REVERSE:**

**Applicant Site Specific Information**

General Property Location (e.g.) 4 miles South of New Creek on Rt. 220 – Turn left on Valley View Road - 500 feet on right

(1) Total block acres_____ (2) Total forested acres_____

(3) Total exclusion acres_____ (4) Total spray acres_____
(Exclusion minimum is 10 acres)

(5) Have you applied for treatment through the WVDA in the past? □ Yes □ No. _____Last year applied

(6) If yes, do you wish to use the same property boundaries as previously submitted? □ Yes □ No

(7) Was your property treated last year? □ Yes □ No. _____Spray material used

(8) Percentage of preferred host trees in proposed treatment block _____%
e.g. % of oak, birch, alder, apple, aspen and basswood on property

(9) Percent forest canopy cover in proposed treatment block _____%

(10) Forest type is (check one) □ Wooded, no permanent residences
□ Wooded residential, permanent residences
□ Wooded recreational, e.g. state park, state forest, resorts

(11) Number of property owners included in proposed spray block _____

(12) Is property gated? □ Yes □ No Combination Lock #_____***Please note that keys must be provided with this application unless the gate will be left unlocked when contacted by the WVDA.***

(13) Is any portion of the property restricted? □ Yes □ No. If yes explain _____

(14) Check or list any potential hazards such as. □ High antennas or towers
□ High power lines
□ Open bodies of water.
Other_____

**Official use only**

**Arcview # _____-_____-_____ Egg Masses per Acre _____**

**Date Surveyed_____/_____/_____Surveys Completed_____ Blow-in-Potential □ yes □ no**

**Surveyed by: _____Qualify for Treatment □ yes □ no**

**Presence of Virus □ yes □ no Presence of Fungus □ yes □ no EM Size □ dime □ nickel □ quarter**

**Quad 1_____Quad 2_____Quad 3_____Quad 4_____**