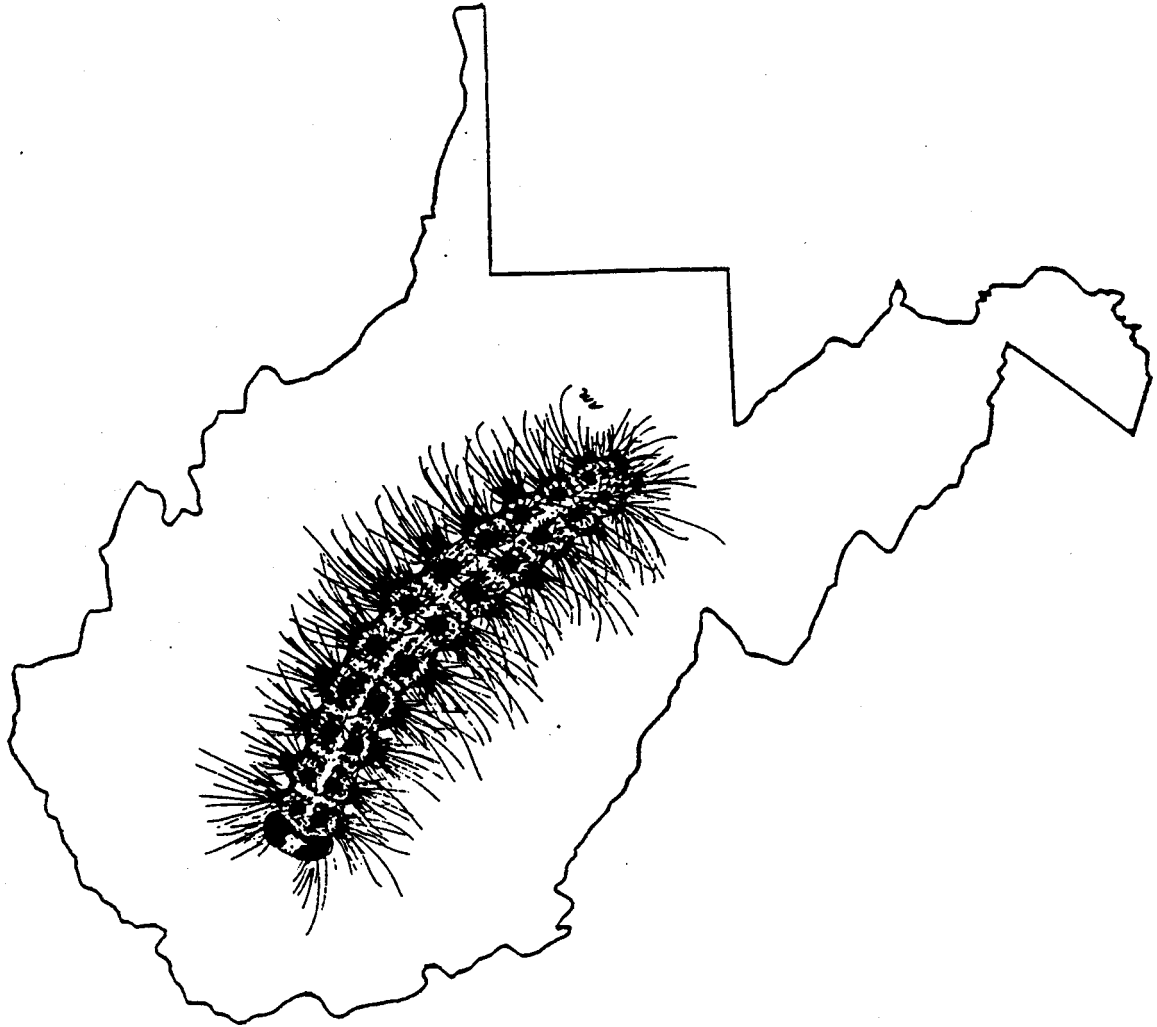


**The Cooperative State-County-Landowner
Gypsy Moth Suppression Program
In West Virginia**



**West Virginia Department of Agriculture
West Virginia Division of Forestry
West Virginia County Commissions
West Virginia Cooperative Extension Service
United States Department of Agriculture-Forest Service**

The gypsy moth is the most serious insect pest ever to invade West Virginia's forests. The first adult male gypsy moths were trapped in West Virginia in 1972. The first caterpillars were found in 1978. Since then this destructive insect has continued to spread, while funding to combat the pest has been difficult to maintain. These circumstances created the need for a gypsy moth cooperative suppression program for landowners in the generally infested areas in West Virginia. This brochure is designed to answer some commonly asked questions and provide information about the cooperative suppression program.

HOW SERIOUS IS THE GYPSY MOTH PROBLEM?

Severe economic loss of valuable timber, significant impact on outdoor recreational opportunities in heavily infested areas, adverse effects on some forms of wildlife through food loss and changes in habitat, and destruction of the aesthetic beauty of our forested communities are expected results of the onslaught of the gypsy moth. In addition, a health problem, in the form of an allergic reaction, may occur in a few people when they come in contact with large numbers of gypsy moth caterpillars.

Repeated heavy defoliation by gypsy moth kills trees. Spruce, pine and hemlocks die after a single heavy defoliation. Hardwood tree mortality, after two successive years of defoliation, can reach as high as 80%. The forest trees preferred by this insect are oaks, and the oak-hickory type makes up about 77% of West Virginia's woodlands.

Studies by the West Virginia Department of Agriculture and West Virginia Division of Forestry confirm that as much as 25 percent mortality after one year of heavy defoliation could be expected in timber stands if gypsy moth populations are left untreated.

WHERE IS THE GYPSY MOTH INFESTATION CURRENTLY?

West Virginia Counties where gypsy moth is known to occur are regulated by the United States Department of Agriculture Gypsy Moth Quarantine (7CFR 301.45) and the West Virginia Department of Agriculture Gypsy Moth Quarantine include: 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, Randolph, Ritchie, Summers, Taylor, Tucker, Tyler, Upshur, Webster, Wetzel, Wirt, Wood and Wyoming Counties.

WHAT IS THE GYPSY MOTH COOPERATIVE SUPPRESSION PROGRAM?

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

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

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

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 indicates it should be possible to go as high as 1,000 - 1,200 egg masses per acre and still obtain adequate timber management protection. Other factors, principally whether the population is building or declining and the size of the egg masses must be taken into consideration before the final decision concerning treatment is made.

Historically, there have been a number of areas that did not conform to the above general guidelines and yet large areas were defoliated where egg mass counts were below 500 egg 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, consideration will be given to treating down to 500 egg masses per acre. Consideration will also be given to treating these areas when the potential for large numbers of wind-blown caterpillars exists. Potential for wind-blown 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 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 omissions. This minimum acreage is necessary to maintain the current low cost of the Program. Adjacent property owners should go together to meet this minimum requirement, as well as to derive 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.

HOW CAN I SIGN UP?

Application forms and brochures are available at the WVDA's Plant Industries Division website at: (http://www.agriculture.wv.gov/divisions/plantindustries/Pages/Forest_Health_Protection.aspx), your local WVU Extension offices, and at WVDA field offices in Charleston (304-558-2212) and New Creek (304-788-1066). **A (survey) deposit of \$1.00 per acre must be submitted with the application.** The application and survey deposit should be submitted no later than the end of August. If you need any 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 with the property boundary marked on it, or an ESRI shape file projected in UTM Zone 17-NAD 83. A WVDA Forest Health Protection Specialist will visit your proposed treatment site to make a determination as to whether or not it qualifies. You will be notified by mail by December 1st if you qualify for participation in the suppression program based on the gypsy moth population density and site quality. The area selected for treatment will be **squared off** to establish a manageable treatment block, which will allow for the most effective aerial treatment. Some of your land may not be treated, after the boundary is delineated and the area surveyed.

Keys or combinations for locks, must be provided with the application at the time of sign up in order that the egg mass survey evaluation can be completed.

Your final decision to participate in the spring treatment program must be confirmed by signing a contract and receipt of all required deposits by the WVDA.

Your application and deposit (made out to WVDA) should be mailed to:

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

HOW MUCH WILL IT COST?

Treatment costs vary from year to year depending on the aerial contract cost (ie. fuel, pesticide, and spray application). Contact your local WVDA representative for the previous year's cost and the current year's estimated cost.

The non-refundable \$1.00 per acre survey deposit will be applied to treatment costs if your lands qualify. There is a maximum \$500.00 deposit per landowner.

The WVDA has received cost sharing dollars in the past that paid 30 to 50 percent of the actual treatment cost. If cost share funds should happen to not be available, due to the lack of a sufficient U.S. congressional budget allocation, landowners should be prepared to pay the total cost of aerial application and pesticide. The WVDA would still contract for the aerial application and pesticide and should be able to obtain a less expensive cost than private landowners working on their own.

WHAT ABOUT PUBLIC FUNDS FOR GYPSY MOTH SUPPRESSION? HOW IS IT DECIDED WHICH LAND WILL BE SPRAYED USING THESE FUNDS AND WHICH LAND WILL NOT?

The WVDA has two objectives in its gypsy moth program; first, to minimize the spread of the pest into non- infested areas of the state and, second, to suppress gypsy moth populations in infested areas to limit, as much as possible, defoliation and tree mortality. Any state funds that become available will be used first to treat isolated infestations of the moth, which may occur outside the normal pattern of infestation, and low- density populations on the fringe of the main infestation. If no such infestations or populations exist in a particular year, any available state funds will be used across the board to reduce the landowner share of the cost of the cooperative suppression program.

If any public money is appropriated to the WVDA to treat infested State-owned lands, it will be used for that purpose.

IS SPRAYING AN EFFECTIVE OPTION?

Yes. Carefully selected treatment materials are the most effective method in preventing defoliation and the rapid spread of this destructive insect. The principal treatment materials used in the WVDA program are:

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

Btk is a bacterium commonly found in forest soils worldwide. It has become one of the most valuable biological pest management tools for a variety of agricultural, forestry, and urban pests. While it is highly toxic to target pests, it is very safe in regard to humans and animals. For example, different formulations of the same biopesticide are labeled to be applied to organic grains such as shelled corn and soybeans during storage and/or to organic bagged grains (popcorn) to prevent Indian meal moth.

Mimic® (*Tebufenozide*)

Tebufenozide is a pesticide in the class of insect growth regulators. This means that, once exposed to tebufenozide, caterpillars are unable to successfully molt and grow. This prevents them from reaching maturity and reproducing. Tebufenozide may be applied by air or ground. It is successful on all population densities.

HOW CAN I GET MORE INFORMATION?

It is not possible to include answers to all questions in this brochure. For more information on the WVDA gypsy moth treatment program, contact WVDA Assistant Director, Quentin "Butch" Sayers or Gypsy Moth Program Coordinator, G. Scott Hoffman at 304-788-1066. Additional gypsy moth program information and assistance may also be obtained through your local WVDA offices located at: Charleston (304) 558-2212, and New Creek (304) 788-1066 or your local county extension agent.