

## Long Island Sustainable Winegrowing Pesticide Selection Protocol

*As sustainable grape growers we are not trying to maintain a sterile vineyard, totally excluding diseases and insects. We acknowledge that they may happen. However, by using pesticides we are trying to keep the negative impacts to a minimum. The presence of low levels of Downy Mildew or Japanese Beetles, for example, is not a problem. They just need to be kept in check through careful observation and the use of inputs when necessary.*

### Goals

Pesticides are used in conjunction with physical practices and the biological activity of natural systems to ensure productivity and to protect grapevines from disease, insect depredation, and undue competition for water and nutrients by weeds. Pesticides are classified into the three appropriate types: fungicides, insecticides and herbicides. Pesticides are registered for use at the federal level by the EPA and at the state level by the NYSDEC, and their actual labels are the legal documents that regulate their use for various crops, in our case grapevines.

The overall goal of any sustainable grapevine protection program is to use the least toxic and least environmentally problematic materials that are effective against grapevine pests and are economically viable. This necessitates an emphasis on pesticides called as Reduced Risk, Minimum Risk, Bio-pesticides, Organic materials, “low-impact” conventional materials and the judicious use of conventional materials, if needed.

### LISW Material Review Committee

The LISW Material Review Committee’s job is the evaluation and ranking of individual pesticide materials for inclusion in the LISW Program. These decisions are made by growers using legitimate government and University databases, label restrictions, Material Safety Data Sheets, the Environmental Impact Quotient (EIQ) and the EPA’s own pesticide classification system as guidance.

No material should be excluded out-of-hand without a full review of its efficacy, cost, environmental impact and toxicological properties. Rather, each material should be evaluated on its full set of qualities, using a balanced approach that considers all factors. The LISW Material Review Committee is also empowered to evaluate new plant protection materials for inclusion as they come onto market.

### Why Certified Sustainable?

The goal of a Sustainable farming program is to avoid industrial farming practices which can become habitual in regions where a program such as LISW does not exist. Our certified sustainable program allows our members to pursue winegrowing practices that have a lower impact on our farm ecosystem than may have previously been in place. In addition it allows our farms to evolve towards a more complex biological system.

Being located in a rainy, marine climate, we have consistently high humidity and average 3-4 inches of rainfall each month of the growing season. Our grapevines are susceptible to rainy growing season diseases such as Downy Mildew and Black Rot, which do not exist in dry summer climates like California or Chile. At the present time there is a lack of organically certified materials with proper efficacy to exclusively control these diseases in our climate. This has been clearly demonstrated in systematic research trials here on Long Island at Cornell’s Research Lab and upstate at Cornell’s NYS Agriculture Experiment Station at Geneva, New York, in organic fungicide trials over several years. Our LISW growers use numerous organically certified fungicides, but also others that are not organic.

The LISW program requires the majority of materials used in fungus control and insect control to be Reduced Risk, Minimum Risk, Bio-pesticides, Organic materials, and “low-impact”. The program encourages growers to experiment with new materials as they become available. In addition sustainable grapevine protection is based on the effective use of physical practices, such as hedging and leaf removal that reduce the risk of disease and lower necessary fungicide use.

We choose the sustainable pathway to produce clean ripe crops using fungicides that have proven efficacy to prevent rainy season disease.

### **Sustainable Insect and Weed Control**

When considering the use of insecticides, decisions should be tied directly to traditional IPM-scouting systems. The LISW program requires the presence of a biological set-aside on the farm to create beneficial insect habitat which assists in the control of problematic insects. We also encourage the use of organic biological insecticides and limit the use of non-organic materials. Another goal is the elimination or reduction in the use of herbicides. Methods include reducing the width of the weed-free strip under the trellis, establishing maintainable ground covers or controlling the undergrowth by non-chemical means, ie--mowing or tilling.

The maintenance of a stable of affordable, effective fungicides and insecticides is critical to sustain the economic viability of our businesses. However, as stewards of the land, we must contemplate toxicological properties, use patterns and environmental impacts of materials. Our first and most essential goal is that materials proposed for inclusion in the LISW program are not problematic to our fragile groundwater ecosystem or our farm ecosystem. It is also important that included materials do not negatively impact soil properties.

It is critical to use fungicidal and insecticidal materials judiciously, as repeated use of certain susceptible products may cause the development of resistant fungal strains and the loss of useful materials. The inclusion or exclusion of materials in a sustainable viticulture program must be achieved through careful evaluation of scientific, agricultural and economic data in tandem with grower's experience and expertise.

## Links to Helpful Websites

The annual NY and PA Pest Management Guidelines for Grapes can be purchased for on-line viewing and/or as a hard copy.

<https://store.cornell.edu/p-193185-2016-new-york-and-pennsylvania-pest-management-guidelines-for-grapes.aspx>

EPA Explanation and List of Conventional Reduced Risk Pesticides:

<https://www.epa.gov/pesticide-registration/conventional-reduced-risk-pesticide-program>

EPA Explanation and List of Minimum Risk Materials:

<https://www.epa.gov/minimum-risk-pesticides>

EPA Explanation and List of Biopesticides:

<https://www.epa.gov/pesticides/biopesticides>

List of organic materials certified by the Organic Materials Review Institute (OMRI)

<http://www.omri.org/home>

List of organic materials certified by Washington State Dept of Agriculture: (WSDA)

<http://agr.wa.gov/FoodAnimal/Organic/MaterialsLists.aspx>

***The information provided in the sections detailing the LISW's pesticide programs should be used as guidelines only. It is the responsibility of the pesticide applicator or the person responsible for pesticide application to check the registration status of pesticides that are applied. All pesticides must be registered for use on grapes in New York. In addition, some materials have a Suffolk County or Long Island restriction, ie—they are not legal to use here, but are legal to use in other parts of New York. Use the following websites to determine the registration status of pesticides in New York:***

***Pesticide products registered for use in NYS—products listed according to trade name; Long Island restrictions are included.***

[http://www.dec.ny.gov/docs/materials\\_minerals\\_pdf/pestprod.pdf](http://www.dec.ny.gov/docs/materials_minerals_pdf/pestprod.pdf)

***As of late 2016, the NYS Department of Environmental Conservation has a new Bureau of Pest Management Information Portal.***

<http://www.dec.ny.gov/nyspad/products?0>

***This replaces the Cornell University/NYSDEC Pesticide Ingredient and Manufacturer System (PIMS) database. The PIMS site is no longer active.***