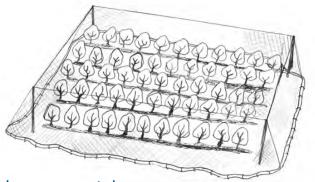
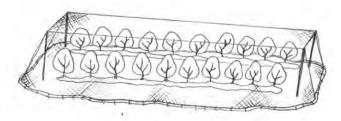
# Frames to Support Exclusion Netting over Blueberries to Prevent Spotted Wing Drosophila Damage

Fine mesh netting is a potential option for farmers to protect blueberries from Spotted Wing Drosophila (SWD) damage. The mesh size needs to be around 1 mm or less. This fact sheet offers three truth-tested frame designs to support netting over blueberries, includes logistical information about available netting, and gives practical tips gathered from farmers across Vermont over the course of a one-year research study about this topic.







## Large net-box

Netting drapes over the entire field. It includes posts at either end of the row, and supportive ones in the middle. Tensioned wires connect each post, and fabric drapes over the entire frame. The ends are secured to the ground with earth staples, sand bags, rocks, blocks of wood, or other available materials.

Advantages: Able to stand inside, and thus harvest without lifting or rolling the netting up for long periods of time (exposing the berries); It can be large enough to drive a tractor underneath and not have to exit the net-box to turns down rows; Only need to manage the netting twice (put up and take down).

**Disadvantages:** Higher up-front cost of materials; Need to sew multiple pieces together because a large enough swath is currently unavailable on the market; Takes a large crew to set up and take down the netting each season.

## Small net-box

Covers as many rows as the dimensions of the netting allows. The example above shows the netting covering two rows, but growers may be able to cover more or less rows depending on their unique situation. While the large net-box design emphasizes labor efficiency, this design reflects the reality that exclusion netting comes in relatively small widths.

**Advantages:** Made from readily available materials (requires less sewing); Does not cover all the aisles, so less fabric needs to be bought.

**Disadvantages:** Need to lift or roll up a side of the net to manage and access berries.

### Medium tunnel

Drape netting over curved metal conduit. Neither wire nor stakes need be used. The advantages and disadvantages of this design mirror those of the small net-box design. I propose this design as a variation of that one, depending on the farmers' preference

and/or access to construction materials. The ends are secured to the ground with earth staples, sand bags, rocks, blocks of wood, or other available materials.



# **Practical Information Regarding Netting**

Exclusion Netting with Mesh Dimensions Appropriate for Spotted Wing Drosophila Management

Brand name	Mesh dimensions	Fabric dimensions	Porosity	Light transmission	Material	Lifespan
ProtekNet Standard Insect Netting (60gr)	1.9 x 0.95 mm	6,6' x 328' 13' X 328' 20' X 328' 26' X 328'	95% approx.	87%	High density polyethylene	U.V. Resistance; 5 years
ProtekNet Standard Plus Insect Netting (80gr)	1.00 x 0.85 mm	6,6' x 328' 13' x 328'	80% approx.	83%	High density polyethylene	U.V. Resistance; 7 years

## **Prevent Tearing**

Utilize tennis balls to provide a smooth covering over wooden stakes. Fasten tensioned wire directly to the top of the wooden stakes with staples, slit open the tennis balls and cover the stake. This provides a smooth surface over which the netting will run as you pull out the large swath of fabric over the support system, preventing snagging and ripping. Use footballs for added surface area and an even smoother pull. The photo to the right displays bird netting over a vineyard, but the same idea applies.



## Fold Accordian-style

When storing netting for the winter, fold it accordion style. The following season, the netting will then unfold smoothly as you pull it out over the support system.

#### **Exclude Other Pests**

The fine mesh of insect netting means the fabric also excludes common blueberry pests like birds (including turkey), and deer.

By Hannah Lee Link, January 2015. Thank you to the University of Vermont Office of Undergraduate Research for funding this project, as well as the Vermont Agency of Agriculture Food and Markets, Specialty Crop Block Grant Program, the Vermont Vegetable and Berry Growers' Association, the Center for Sustainable Agriculture, University of Vermont Extension, and the University of Vermont, Department of Plant and Soil Science. Special thank you to Madeleine Lyman for the netting illustrations, and to David Link for graphic design support. For further information, contact <a href="https://link.22@gmail.com">https://link.22@gmail.com</a>