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USE OF PLASTIC NETTING

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Introduction

Conwed Plastic Division was approached two years ago regarding the use of plastic netting as a means of keeping birds from feeding in vineyards and other fruit crops. As a result of working with various interested people on the west coast, we developed a black pigmented, ultraviolet light (sunlight) stabilized netting. This netting maximizes the resistance against sunlight exposure and has very good tensile strength. The following demonstrates what individual farmers have achieved using Conwed Plastic Bird Control Netting.

We should say at the outset that these netting systems seem to be best suited to high value crops, such as table grapes, varietal wine grapes, blueberries, etc. where severe bird damage to a crop is known to occur with regular frequency, and where isolated fields are located -- i.e., no other easy food source is available for the birds.

Netting for Vineyards

Table grapes and varietal wine grapes are vulnerable to bird damage from migrating flocks of starlings and resident birds which nest and/or roost in open fields adjacent to the vines, and in nearby trees and power lines. The netting can effectively be installed by unrolling the netting down each vineyard row, and allowing it to drape over the vines and the edges touch the ground. The netting edges are held to the ground using metal staples, or by covering the edges with dirt, rocks, etc. See Fig.1.

The netting is usually applied when the grapes start to turn color, and/or when the sugar content is about 10-12%. Two or three men can easily install the netting, covering up to 20 acres per day.

The netting can be removed by reversing the installing process. If good handling techniques are employed, and proper storage of the netting is maintained, the netting should be reusable for several growing seasons. We have already completed two growing seasons in some fields.

Costs for this system will vary, depending on vineyard layout and terrain. We estimate the range of netting costs, for a 14 feet wide netting at about $215-$250 per acre, and installation and removal costs at about $40-$50/acre each. Preliminary results from 25 field tests during 1973 indicate netting effectiveness from 90% to over 99% in preventing birds from getting to the grapes.

Netting for Blueberries

Bird control in blueberry fields presents a different problem. A long harvest season and plants which bear fruit on the outer branches
Photograph 1. Vineyard netting cover to prevent entry by birds. Berstein's Winery, Mount Veeder Road, Napa Valley, California.

Photograph 2. Blueberry field enclosure to prevent entry by birds. Teitzel's Rainier View Blueberry Farm, Puyallup, Washington.
prevent the netting from being draped over the plants. Highbush blueberries in Washington have been enclosed in netting via a supported enclosure. See Fig. 2.

Metal poles 12 feet in length are set at the end of each row to a depth of 3 feet. Poles, 9 feet in length and placed at 20 foot intervals down the rows, are not set in the ground. Wire is run from pole to pole, forming a grid. Netting is laid over the grid system. The netting is overlapped about 6 inches. The overlays are secured to prevent openings from occurring. The netting is draped to the ground to completely enclose the field.

The netting can be removed and stored for the following season in a manner similar to installation. We do not have detailed economics on installation costs on this system at this time. These costs should be available in early 1974. The farm utilizing the netting in 1973 obtained 6 tons of blueberries per acre in 1973 vs. 2 tons per acre in the same, but unnetted fields in 1972. The farmer successfully utilized mechanical shaker harvesters on parts of his covered netting fields in 1973. In addition, he reduced the number of pickings (by hand) from five, in 1972, to two, in 1973.

- The benefits offered to a user include:
  1. Nearly 100% effectiveness - a physical barrier between the birds and the fruit crop.
  2. The netting is non-toxic.
  3. The netting system is noiseless.
  4. No damage to the fruit should be expected.
  5. The netting retains its shape - and resists water and most chemicals.
  6. The netting can be reused where good handling and storage techniques are employed.

Potential research exists for (1) utilizing the netting systems in conjunction with other bird control devices, (2) determining the extent of coverage required, i.e. full 100% coverage, or only along outer rows where birds are most prevalent; determining whether the color of the netting has any influence on the birds; determining the effectiveness of single season use nettings.

We believe the netting systems have applicability in other fruit crops such as cherries, strawberries, peaches, etc. Also, there are potential applications for these and other nettings in urban and industrial areas. Our company is a flexible, customer oriented organization interested in developing new applications for the effective control of bird pests.