

Evaluation of novel techniques for bird management in sweet corn

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Bird damage is a persistent problem for vegetable producers. In an attempt to help our growers mitigate this pest we evaluated novel bird repellants on four vegetable farms in western New York. In this pilot project year the Cornell Cooperative Extension, Cornell Vegetable Program found the chemical deterrent Avian Control (methyl anthranilate) and the “air-dancer” successfully dissuaded birds at all farms increasing yield 1 to 19% with an average increase return of \$22-\$418/A. The participating farms were excited about the potential of these deterrents in reducing their losses from bird damage and support future evaluations to refine the best management tactics.



Four on-farm demonstration trials were set-up in sweet corn to evaluate the bird repellants. Two farms were located in Eden, NY, one in Ransomville, NY and the fourth in Belfast, NY. All farms assisted in observing bird migration, sweet corn maturity and application of the chemical deterrent treatments on their farm. At each location bird activity was



monitored starting July 7. The number and identity of birds flying in and out of the field locations were enumerated between 2 and 8 times at participating farms, which was dependent on crop maturity and bird migration. Digital images were captured when possible. Crop maturity at each field location was determined by counting the number out of 100 ears that had brown silk and then determining a score based on a scale of 3< 34% silk brown, 4=34-66% silk brown, and 5=67-100%. Ear damage was recorded by counting the number of ears damaged and number of kernels damaged from 10 ears in 20 locations within each treatment plot. Maturity and damage data was collected at least 8 times at each farm during the trials. Images of bird activity and damage were documented.

Initial bird damage was high, 86% of ripe sweet corn ears were damaged overnight at one location. 10% damage was recorded where other tactics were being deployed – air cannon and nuisance permit. Data gathered from the four participating farms found untreated plots experienced 2 to 30% damage. Average harvestable ears were increased 4.2% with two applications of Avian Control and the air-dancer will work on small scale 9% increased yield compared to untreated plots. We estimated from the data we collected that Avian Control and the “air-dancer” successfully dissuaded birds at all farms increasing yield 1 to 19% with an average value of \$22-\$418/A. Success was highly dependent on application timing, placement, and crop maturity. Cooperating vegetable producers were excited about the initial results and support future research to further refine best management practices for bird control and expansion to determine if some of the tactics, such as the air-dancer, can be used for other wildlife deterrence. The cooperating farms plan to implement one or a few of the techniques in future seasons.



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