

# Wildlife Damage Management

**Tuesday morning 9:00 am**

**Where:** Gallery Overlook (upper level) Room C & D

**MI Recertification credits:** 2 (COMM CORE, PRIV CORE)

**CCA Credits:** PM(2.0)

**Moderator:** James DeDecker, Extension Educator, MSU Extension, Rogers City, MI

- 9:00 am      Feral Swine Incidence and Management
- Gary Roloff, Fisheries & Wildlife Dept., MSU
  - Dwayne Etter, Wildlife Research Specialist, DNR, East Lansing, MI
- 9:40 am      Factors That Contribute to Bird Damage and Management Strategies
- Catherine Lindell, Integrative Biology Department/Center for Global Change and Earth Observations
- 10:20 am     Regulations and Services Related to Wildlife Damage Management
- Tim Wilson, District Supervisor, USDA Wildlife Services, Okemos, MI
  - Casey Reitz, Permit Specialist, DNR Wildlife Division, Lansing, MI
- 11:00 am     Session Ends

# Factors that Contribute to Bird Damage and Management Strategies

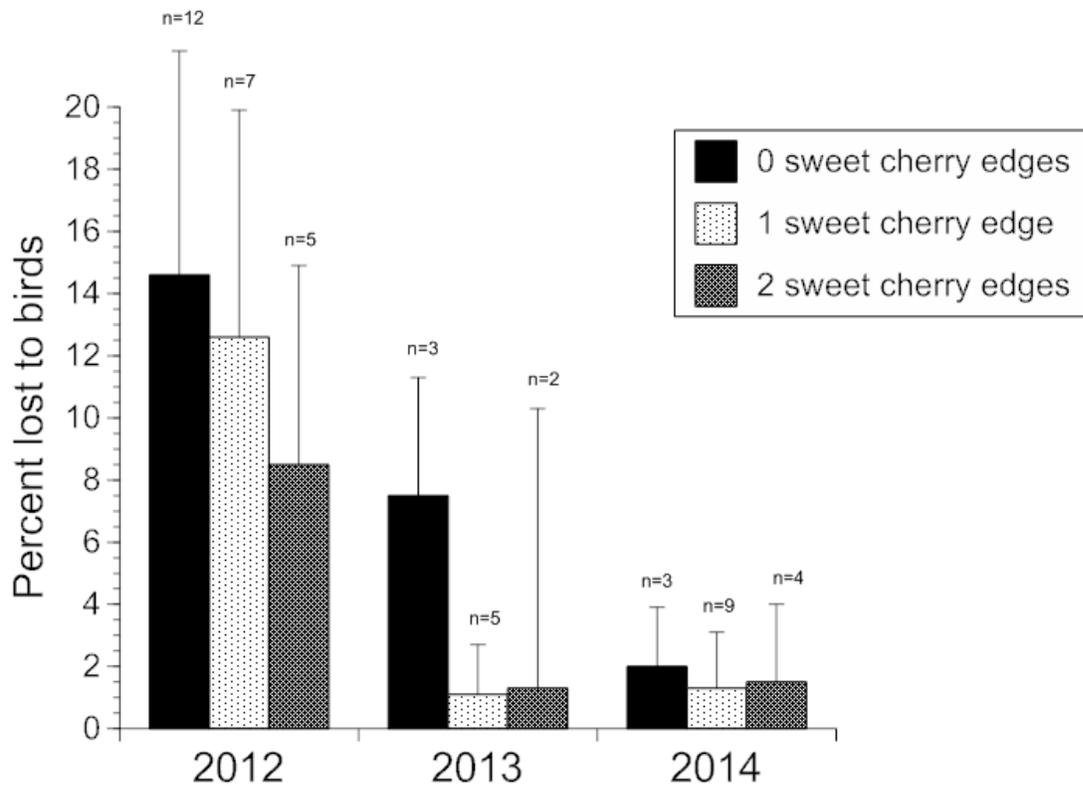
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## Risk factors for high fruit damage by birds.

A. When there is less fruit in a given area, there will be higher percent bird damage to the fruit that is available. When/where to expect higher percentages of damage: 1) low-yield years (for example 2012 in Michigan, Figure 1), 2) early-ripening varieties.

B. Blocks near resources important to birds are at higher risk for damage. When/where to expect higher damage: 1) blocks under wires, 2) edges of blocks not adjacent to other sweet cherries (**Figure 1**), 3) near night roosting sites, 4) isolated blocks with little human activity, 5) potentially blocks near dairy farms.

**Figure 1.** Michigan sweet cherries had higher percent bird losses in 2012 although this effect varied with the number of block edges adjacent to other sweet cherry blocks. In other words, blocks near other sweet cherry blocks are protected to some degree from bird damage.



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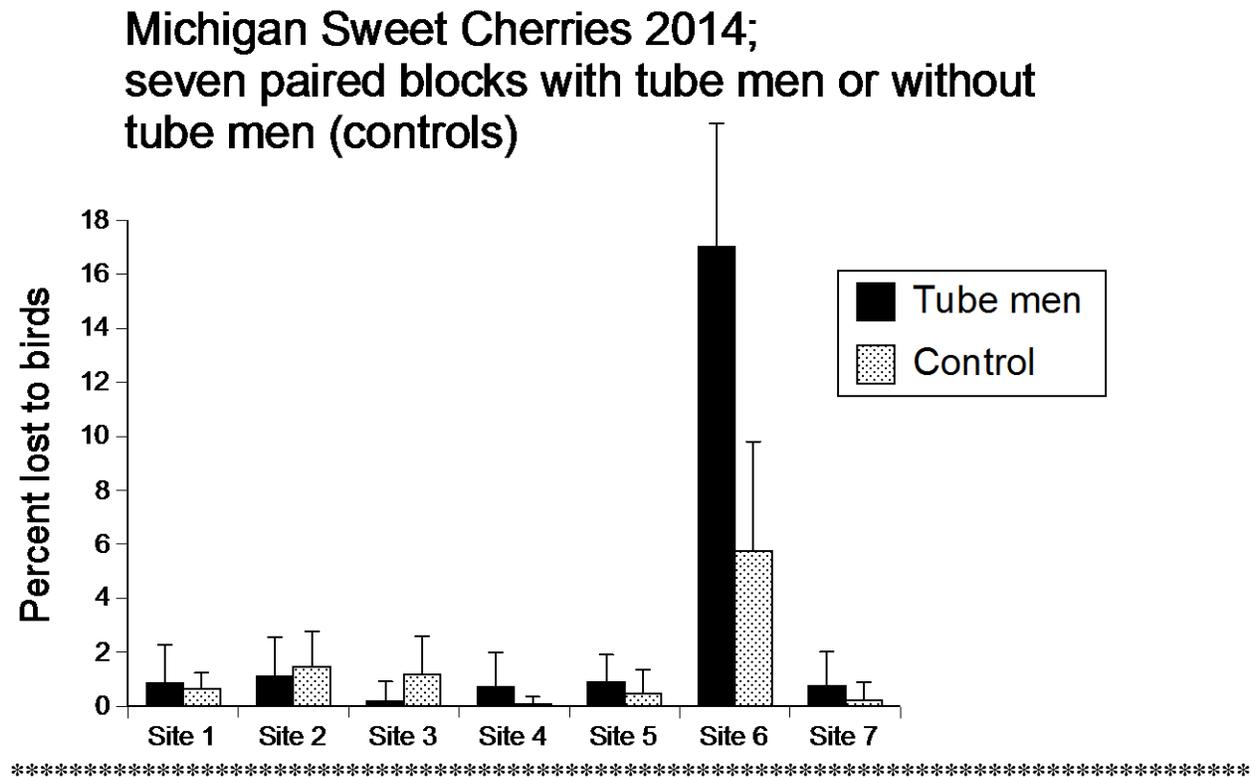
The actual **numbers** of fruit lost to birds were relatively constant in several Michigan sweet cherry orchards we sampled in 2012-2014 (**Table 1**). Because the fruit yields were much higher in 2013 and 2014 (as measured by the number of fruits sampled) than in 2012, the **proportion** lost was much higher in 2012. **Table 1** shows results from six Michigan sweet cherry blocks we sampled for bird damage in 2012 through 2014.

**Table 1.**

Site	Number of fruits lost to birds			Number of fruits sampled		
	2012	2013	2014	2012	2013	2014
1	33	51	34	184	2703	4521
2	45	100	89	1031	3218	8220
3	18	43	29	44	517	3292
4	0	3	6	5	308	1979
5	52	39	46	559	3572	11416
6	6	25	13	462	3495	6211

Therefore, in high-yield years, bird management may be less critical than in low-yield years. Bird management also may not be very effective in high-yield years. In 2014, for example, with high sweet cherry yields, the percentages lost to birds in orchards with and without inflatable tube men were generally low and similar (**Figure 2**).

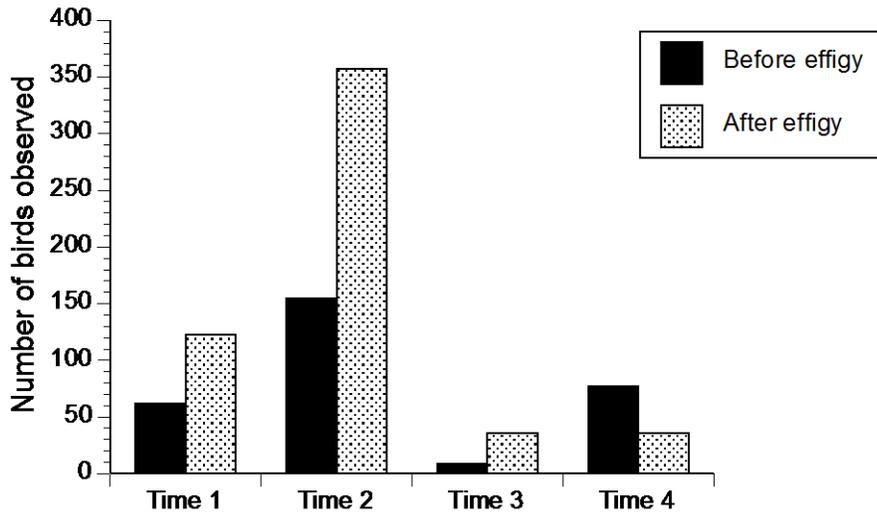
**Figure 2.**



We did not find that effigies (dead birds) hung in a sweet cherry orchard changed the abundance of birds in an observation area adjacent to the effigies (**Figure 3**). We did not test whether adding an additional deterrent, like a few shotgun blasts, to the effigies changed bird abundance.

**Figure 3.**

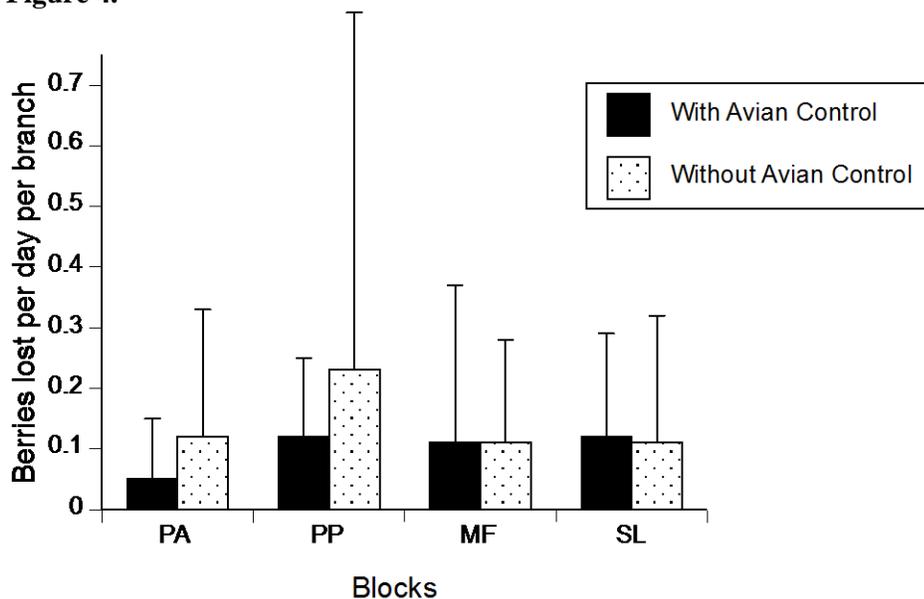
**Number of birds observed in a Michigan sweet cherry orchard before and after placement of an effigy (dead birds) near the orchard**



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In 2015 we cooperated with a blueberry grower who sprayed half of 4 fields with Avian Control before harvest and left the other half unsprayed. We sampled approximately 40 canes from each half of the four fields for a total of approximately 320 canes sampled. We counted berries on each cane approximately three weeks before harvest and again 2-3 days before harvest. We did not detect a statistically significant difference in the number of berries lost per day in the sprayed vs. unsprayed halves of the fields (**Figure 4**).

**Figure 4.**



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**Considerations in development of bird management strategies.**

Each farm is unique and should be assessed for risk factors like wooded edges that provide “staging areas” for fruit-eating species like American robins.

Some deterrents, like lasers, work in particular situations. For example lasers deter Canada geese in low-light situations. However, lasers are not likely to deter the pest birds generally seen in sweet cherries during the day.

Using multiple scare deterrents, deploying them early in the growing season, and moving them frequently should enhance their effectiveness in deterring birds.

Netting, when done with frames and with care to make sure netting reaches the ground, is generally effective against birds.

Providing nest boxes and perches for predatory birds will increase the presence and may increase the activity of these birds in orchards. The most common predatory bird, the American kestrel, preys on rodents that eat young fruit trees, insects, and small birds. These types of biodiversity-friendly pest management strategies may also be useful in marketing.

**For information about deploying kestrel nest boxes, please see:**

[http://birddamagetofruitcrops.info/PDFs/OrchardKestrelBoxFactSheet\\_20140310.pdf](http://birddamagetofruitcrops.info/PDFs/OrchardKestrelBoxFactSheet_20140310.pdf)

**Acknowledgments.**

U.S.D.A. Specialty Crop Research Initiative, many state fruit grower industry groups, Avian Control Inc., fruit growers in Michigan, New York, Oregon, Washington, and California.