

**SOUND AGRICULTURAL PRACTICE**  
**Opinion Number 01-2**

**SUBJECT:** Request for an opinion pursuant to Section 308 of the Agriculture and Markets Law as to the soundness of a certain agricultural practice conducted by the Candella Farm in the Town of Marcy, Oneida County.

**REQUESTOR:** Mr. Michael Candella  
9256 Route 49  
Marcy, New York 13403

**Preliminary Statement**

In a letter dated September 14, 2000, Joseph Saunders, an attorney representing Michael Candella, requested that the Department review the soundness of an agricultural practice on the Candella farm. Mr. Saunders requested that the Commissioner issue an opinion as to the soundness of the use of propane cannons and audio tapes of bird distress calls, from a noise perspective, for the protection of crops grown on the farm. Neither the Town nor the County have a noise ordinance. Mr. Candella has been sued by neighbors because of noise alleged to be generated by devices at one of the parcels he farms. A nuisance action was brought in New York State Supreme Court, Oneida County by three neighbors in August of 2000. At the present two neighbors remain in the action, one (the "complainant") of whom provided comment to the Department directly.

The Department conducted a sound agricultural practice review of the use of the propane cannons and audiotapes of bird distress calls at the Candella farm. On October 4, 2000, Matt Brower, Department Agricultural Resource Specialist and a Certified Crop Advisor, visited the Candella farm to gather information on the use of the cannons.

**Information Considered in Support of the Opinion**

1. The Candella family owns and operates a roadside produce stand located at 9256 NYS Route 49 in the Town of Marcy, Oneida County. The farm operation consists of approximately 35 acres which are owned by the Candellas and 80 acres of land which they rent. The Candellas use the land for the production of sweet corn and other produce which is sold at the stand. The parcel in question is rented by the Candellas and is approximately 80 acres in size, approximately 40 acres of which is used for crop production. The parcel is located on Cavanaugh Road in the Town of Marcy and is owned by William H. Maine. According to the Department's records, the farm is in Oneida County Agricultural District #10, which was recertified on or about October 26, 2000.

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2. According to Mr. Candella, he has been using the subject parcel for approximately 11 years. He stated to Mr. Brower that he uses noise generating devices, including audio tapes of bird distress calls and propane cannons, to protect his sweet corn from damage caused by grackles, blackbirds, and starlings, as well as other birds. Mr. Candella also uses other devices such as fake owls and eye-spot balloons to protect the crops. He stated that he has been using the cannons at the site for 11 years and the distress calls for approximately 4 to 5 years. He indicated that he uses one or two cannons to protect the corn.
3. According to Mr. Candella, the devices are generally used from approximately the end of July until the first week in September. Mr. Candella's field notes indicated that the cannons were last used on September 8, 2000. He stated that the cannons are used between approximately 8:00 a.m. and 7:30 p.m. Mr. Candella estimated that approximately 90% of his crop would be damaged if he did not use the devices.
4. Mr. Candella stated to Mr. Brower that the devices are turned on and off manually. After reviewing his field notes he indicated that the cannons are generally turned on between 7:30 a.m. and 8:00 a.m. and turned off between 7:00 p.m. and 8:00 p.m.
5. Mr. Candella stated that the cannons are generally set to fire every 3 to 4 minutes, depending on bird pressure. He stated that the firing interval is increased when the bird pressure decreases. According to Mr. Candella, because the firing of the cannons is sometimes staggered, it is possible at times to hear the sound of the cannons firing approximately once every 90 seconds which from a distance might sound like one cannon firing at a shorter interval. He also stated that he places the devices, particularly the cannons, as far away from houses as possible, while still achieving an adequate level of protection for the crops. Mr. Candella indicated that to the extent feasible he moves the cannons from time to time. However, the location of the field in relation to nearby houses and the need to keep the cannons away from the houses limits his ability to move the cannons around the field for better crop protection. According to Mr. Candella, he positions the cannons facing away from the houses. Mr. Candella also indicated that a portion of the parcel closest to the complainant's house is not planted in an effort to reduce the potential for disturbance. At the time of Mr. Brower's visit the cannons were placed at the far end of the field, approximately 1000 feet from the complainant's house. The field is well screened by trees and shrubs.
6. According to Mr. Candella, he uses two distress calls, which at times may go off as often as once every 1 to 2 minutes. Mr. Candella explained that like the cannons, the distress calls are staggered. As a result, at times they can be heard more frequently. Mr. Candella stated that the duration of the distress calls is approximately 30 seconds.
7. The Department mailed a letter to thirteen landowners adjacent to the Maine property, which included the parties involved in the lawsuit against Mr. Candella, notifying

them of the agricultural practice review and inviting them to comment on the practice. The Department received one response from Steven A. Smith, the attorney representing the parties suing Mr. Candella.

8. According to Mr. Smith, the bird distress calls are played at 60-second intervals and the cannons fire every 60 seconds. Mr. Smith also stated that the devices are used from pre-dawn until approximately 9:30 p.m. Mr. Smith states that the cannons are located within 800 feet of the residence of one of his clients. Mr. Smith also indicated that the devices disrupt the sleep of one of his clients. During a follow-up phone conversation on December 18, 2000, Mr. Smith indicated that the cannons are used from dawn, or slightly before, until dusk, or slightly after.
9. In his letter to the Department, Mr. Smith stated that according to the Town of Marcy Zoning Ordinance, agriculture is a prohibited use for this parcel. Mr. Smith also questions the need for the devices. Mr. Smith stated that "there exists no scientific study or evidence to show that the type of bird control devices utilized by Mr. Candella is necessary for crop production." According to Mr. Smith, "Even assuming Candella's bird control devices are necessary to crop production, they are not being used properly." Mr. Smith referred to a report of the Ontario Ministry of Agriculture, Food and Rural Affairs, dated June 1998. According to Mr. Smith, "The interval used by Candella for bird bangers and distress calls is only 60 seconds. The study concludes the interval should never be less than 3 minutes."
10. Mr. Smith provided the Department with two videotaped recordings of the devices. Mr. Smith indicated that, the tapes were submitted to demonstrate the level of sound intrusion on one of his clients' property at various locations in and around his home. After listening to the tapes, Mr. Brower concluded that it is clear that the devices can be heard from the neighbor's property. Mr. Brower describes the bird distress devices as sounding similar to normal bird noises that one would expect to hear during the summer. Mr. Brower found that on one portion of the tape the sound of cannon fire could be heard approximately every 60 seconds. Mr. Brower indicated that he was unable to determine the frequency of the firing on the other portions of the tapes because of the short duration of the recordings.
11. Mr. Smith's letter to the Department included a signed affidavit from one of his clients, the complainant. The signed affidavit, dated November 1, 2000 states that "Mr. Candella has been producing loud and offensive noises on the aforesaid farm property, which upon information and belief consist of blaring tape recorded animal noises, gunfire, cannon fire, or 'bird bangers', and related noise which unnecessarily and unreasonably disturbs the surrounding neighborhood. The noises commence in the pre-dawn hours and continue past 9:00 p.m. in the evening." Mr. Smith's client also states in the affidavit that the "unreasonable noises created by Mr. Candella destroy the quiet and peaceful enjoyment and occupation of my residence and disturbs and prevents me from sleeping and conducting my daily activities." In the affidavit, Mr. Smith's client also states that his "primary objection to Mr. Candella's operations

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are the bird bangers and loud recorded animal distress calls he plays constantly throughout the day, for more than three months out of the year.” During a phone conversation on December 18, 2000 the complainant indicated to Mr. Brower that the cannons are used from dawn to dusk.

12. No comments were received directly from the other plaintiffs identified in the legal action against Mr. Candella, nor from other neighbors.
13. Mr. Brower contacted Brian Scala, supervisor for the Town of Marcy, to gather information on the use of the cannons. According to Mr. Scala, the parcel in question has been farmed continuously since prior to enactment of the zoning ordinance. As a result, the agricultural use of the parcel is allowed based on a grandfather provision in the Town zoning ordinance (Town of Marcy Zoning Ordinance, Article VII, Section 41). Mr. Scala stated that the Town has received no other complaints about the devices other than by the complainant. He stated that it is his understanding that Mr. Candella has made attempts to resolve the issue. Mr. Scala also stated that the Town does not have a noise ordinance.
14. According to the fact sheet, from the Ontario Ministry of Agriculture, Food and Rural Affairs<sup>1</sup>, referred to by Mr. Smith in his letter to the Department, “Unchecked, birds can completely destroy an entire crop. A flock of 5000 starlings can consume up to 1 ton of food over a 10 day period.” The fact sheet also points out that bird damage is increasing because “bird populations are increasing, and there have been changes to migration patterns due to climatic changes.” According to the document, birds usually feed early in the morning around sunrise and late in the afternoon around sunset. According to information provided by Mr. Candella, he complies with a number of the “Guidelines on the use of propane-fired cannons” contained in the document, including: use between sunrise and sunset when birds feed; operate no more than one unit per 2 ha (5 acres), unless it is absolutely necessary; and avoid operating near neighbors’ houses.
15. According to the Ontario Ministry’s fact sheet, birds react more to acoustical deterrents than visual deterrents. Visual deterrents should be used with acoustical systems, as they rarely provide adequate protection by themselves. The Ontario Ministry of Agriculture, Food and Rural Affairs recommends an integrated approach to controlling bird damage. This approach which is similar to that used by Mr. Candella, includes: using a combination of scaring methods that affect the bird’s sense of sight and sound and create a sense of fear and positioning the devices along the perimeter of the area to be protected, near trees and at entry areas.

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<sup>1</sup> Fraser, Hugh W., K. H. Fisher and I. Frensch. Bird Control on Grape and Tender Fruit Farms. Ontario Ministry of Agriculture. 1998, pp. 1-11.

16. On December 11, 2000 Mr. Brower contacted Dr. Paul Curtis, Extension Wildlife Specialist at Cornell University, to obtain information on the control of birds in corn crops. Dr. Curtis indicated that the estimated crop damage figure of 90% stated by Mr. Candella is higher than he has seen. Dr. Curtis stated that a 10-30% crop damage with no protection is fairly common, depending on bird population. According to Dr. Curtis, the birds that are most likely to cause crop damage are blackbirds and grackles. These birds nest in wetland areas that contain phragmites and cattails. Crop damage can be higher than 10-30% if nesting areas are close to the fields. Dr. Curtis stated that the birds will travel up to 10 kilometers from the nesting areas to feed. A review of the topographic maps for this area indicates that there are large wetland areas, which could provide favorable nesting, within a 6 mile radius of the parcel in question. According to Dr. Curtis, the shorter the firing interval the more likely birds will become accustomed to the noise, which may reduce the efficacy of the cannons.
17. Dr. Curtis provided the Department with a brochure titled "Birds," that he and Michael J. Fargione prepared. The brochure discusses bird damage and control. According to the brochure, "Blackbirds cause major losses in sunflower and corn fields." Also, "Migratory species (i.e., starlings, blackbirds, etc.) often forage in large flocks, and can cause severe crop losses in a few days." The brochure states that recorded distress calls have been successful at driving birds from fields. Also, a combination of control methods including distress calls, cannons, and visual devices provides better protection than one single control method. Curtis and Fargione also indicate that scare devices must be used from shortly before sunrise until sunset for adequate protection.
18. On January 16, 2001, Mr. Brower contacted Jeanine Broughel, an Environmental Chemist at the Department of Environmental Conservation, to gather information concerning the use of poisons or repellants for crow control. According to Ms. Broughel, *Avitrol* is a restricted use pesticide that is labeled for crow control.
19. On January 16, 2001 Mr. Brower contacted Dr. Curtis for information regarding the use of *Avitrol*. According to Dr. Curtis, one of the main problems with using the poison for crow control is that it would be available to other nontarget birds and wildlife. Dr. Curtis also indicated that neighbors would be disturbed by the sight of a crow that was in the process of dying after being poisoned by the *Avitrol*.

## Findings

Based upon the facts, information and circumstances described above, and in consultation with the Department of Environmental Conservation; the Advisory Council on Agriculture; the New York State College of Agriculture and Life Sciences at Cornell; and the Sound Agricultural Practice Guidelines<sup>2</sup> by which agricultural practices are evaluated, I find the following:

1. Neither the Town of Marcy nor Oneida County have a local noise ordinance or other restrictions on the use of propane cannons or audiotapes of bird distress calls. The Department has found no evidence or received other information indicating that the Candellas have been cited for any violation of federal, state or local law as a result of the use of such devices.
2. The Department has found no evidence that the use of the devices has resulted in bodily harm or property damage off the site. One neighbor has stated that the cannons are disturbing and interrupt his sleep.
3. The use of some type of bird control method is needed to prevent damage to the corn crop. Without the use of this type of bird control, the Candellas would suffer an economic loss as a result of the cost of planting and the crop production loss. According to Dr. Curtis, the combination of distress calls, eye-spot balloons and propane cannons provides the most effective method for controlling birds. The Department does not consider *Avitrol* to be a reasonable alternative because its use would pose a risk to nontarget birds and wildlife.
4. The propane cannons and audiotapes of bird distress calls provide a cost-effective method of protecting the corn crop. Mr. Candella only uses the devices when necessary and only during the daylight hours. The devices are positioned in such a way as to be as far away from neighboring houses as possible and still provide adequate crop protection. Because of the size of the field, Mr. Candella must use more than one cannon in order to achieve adequate protection. As a result, from some locations near the field, it is possible to hear the sound of cannon fire at 60 to 90 second intervals at times because the firing is staggered.

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<sup>2</sup> On November 1, 1993 the NYS Advisory Council on Agriculture published its report entitled *Protecting the Right of New York Farmers to Engage in Sound Agricultural Practices*. The Council developed guidelines to assist the Commissioner of the Department of Agriculture and Markets in determining what is sound pursuant to Section 308 of the Agriculture and Markets Law. The Guidelines state that the practice 1) should be legal; 2) should not cause bodily harm or property damage off the farm; 3) should achieve the results intended in a reasonable and supportable way; and 4) should be necessary. The sound agricultural practices guidelines recommended by the Advisory Council on Agriculture are given significant weight in assessing agricultural practices.

**Conclusion**

Based on the foregoing and in accordance with section 308 of the Agriculture and Markets Law, I conclude that, from a noise perspective, the use of propane cannons and audiotapes of bird distress calls on the Candella farm for the protection of crops grown on the farm, as described above, is sound.

5/14/01

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Date

*Nathan L. Rudgers*

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Nathan L. Rudgers  
Commissioner