

SOUND AGRICULTURAL PRACTICE
Opinion Number 12-1

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 Deer Run Winery in the Town of Geneseo, Livingston County.

REQUESTOR: Mr. Scott M. Kuyon
3772 West Lake Road
Geneseo, NY 14454

Preliminary Statement

By letter dated August 26, 2011 Scott M. Kuyon requested that the Department review the soundness of an agricultural practice at Deer Run Winery. Mr. Kuyon requested that the Commissioner issue an opinion as to the soundness of the use of a propane cannon, from a noise perspective, for the protection of crops grown on the Kuyon property. The Town of Geneseo and Livingston County do not have noise ordinances applicable to commercial agricultural operations. However, Mr. Kuyon has received a complaint from a neighbor concerning noise generated by the propane cannon.

The Department conducted a sound agricultural practice review of the use of the propane cannon at Deer Run Winery. The following information and findings have been considered in reaching this opinion.

Information Considered in Support of this Opinion

1. Mr. Kuyon manages and operates a small family-owned winery located at 3772 West Lake Road in the Town of Geneseo. The Kuyons own a 14.8 acre parcel of land, 5 acres of which is currently planted to grapes. According to the Department's agricultural district file, the farm is located in Livingston County Agricultural District #2 which was certified January 12, 2006, with an anniversary date of November 6, 2013. The Town of Geneseo Assessor confirmed that the Kuyon property receives an agricultural assessment annually.
2. On September 15, 2011 Mike Saviola, Department Agricultural Resources Specialist, went to the winery to gather information on the use of a propane cannon. The cannon was in use at the time of the visit. Mr. Saviola observed that the grapes are planted at the south-western portion of the property and that the cannon was located along the southern edge of the property. Mr. Saviola observed that the nearest residence was located approximately 1/3 of a mile from the location of the propane cannon. Mr. Saviola also observed that the nearest residence is screened from the cannon by a wooded hedgerow.

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3. In a letter dated August 26, 2011, Mr. Kuyon indicated that 5 acres of grapes are planted on the property; 4 acres of which are currently producing a yearly average of 3 tons of grapes per acre of land. According to Mr. Kuyon, this yield represents about 40 to 60 percent of his annual wine production. The remainder is purchased as juice and ripened grapes from growers elsewhere in the Finger Lakes region.
4. Mr. Kuyon indicated that a propane cannon is utilized to deter birds from entering the 5-acre vineyard. Mr. Kuyon further stated that, along with other methods of wildlife control, the propane cannon is utilized every 8 to 10 minutes from 7:30 am to 7:30 pm from mid-August to the end of September to deter flocks of birds from damaging the grape crop. He periodically moves the cannon throughout the vineyard to lessen the chance of birds becoming accustomed to it.
5. Mr. Kuyon stated that, in addition to the propane cannon, he employs various methods to deter birds and other wildlife from damaging the farm's grape crop during the late summer and fall. The vineyard portion of the property is surrounded by an "electra-braid" electric fence in an attempt to exclude deer and other small mammals. A "low wire" hi-tension electrified wire is utilized to keep raccoons and woodchucks out of the vineyard. According to Mr. Kuyon, his primary pests are birds. Therefore, in order to deter birds, the farm employs a number of methods of controlling crop damage from birds including the use of streamers, scare-eye balloons, electronic bird distress calls, and the propane cannon. Mr. Kuyon indicated that he does use some netting to protect select varieties of ripening grapes but it has been his experience that the use of netting is very labor intensive and cost prohibitive. In addition, Mr. Kuyon stated that some birds will still penetrate the netting to access the ripening grapes.
6. During his field visit Mr. Saviola walked within the fenced perimeter of the vineyard and could clearly hear the cannon. It fired at random intervals ranging from 8 to 10 minutes in duration. The sound was comparable to that of a shotgun being fired in the field.
7. Mr. Kuyon stated that in August of 2011 a nearby neighbor complained to him about the utilization of the propane cannon at the vineyard property. According to Mr. Kuyon, the complaining neighbor stated that noise generated by the cannon was affecting the behavior of his pet dog's ability to go outside the house to urinate and defecate. Mr. Kuyon indicated that he informed the neighbor what the blasts were and why they were necessary to protect the ripening grape crop from bird damage.
8. According to information received from Mr. Kuyon, on or about August 18, 2011, the Livingston County Sheriff received a complaint of shotgun blasts at Deer Run Winery from the complaining neighbor. The responding Deputy visited both the vineyard property as well as the complaining neighbor's property. The neighbor lives approximately 1/3 mile from the vineyard portion of the Kuyon property where the

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propane cannon is utilized. A police report (Incident # 2011-00015000) was filed subsequent to the complaint on October 3, 2011 by the Livingston County Sheriff's Department.

9. On September 20, 2011, Mr. Saviola contacted the Livingston County Sheriff's Department to obtain a copy of the police report related to the complaint made on August 18, 2011. On September 23, 2011, Mr. Saviola spoke with Investigator Menzo Peck of the Livingston County Sheriff's Office who indicated that he was the responding Deputy to the 911 cell phone call made by Mr. Kuyon's neighbor. Investigator Peck indicated that he explained to the complaining neighbor that his residence was located in an "agricultural area" and to expect noises and activities related to farming operations.
10. According to the incident report a 911 cell phone call was placed on Thursday, August 18, 2011 at 1:04 PM. The nature of the call as indicated by the caller was "Shot gun blasts going off Deer Run Winery."
11. On September 19, 2011 the Department mailed a letter to four (4) landowners adjacent to the Kuyon property and one non-adjacent landowner notifying them of the agricultural practice review being conducted by the Department and also inviting them to comment on the practice under review.
12. The Department received one response providing comments on the practice from the non-adjacent landowner who initiated the verbal complaint with the Livingston County Sheriff's Office. The neighbor's letter references concerns related to his dog which is fearful of going outside due to the utilization of the propane cannon at the vineyard. He attached to his letter an invoice from his veterinarian for a drug used to treat anxiety disorders. He indicated that his wife is a nurse and sometimes works overnight shifts and that the sound of the cannon prevents her from falling asleep on those days. His letter further references his inability to "enjoy the company of friends and family because of the sound." He further indicated that the cannon begins firing at 6:45 AM and ends at 7:15 PM, on some occasions firing until 9:00PM and on two consecutive Saturdays the cannon fired every 4 minutes and 15 seconds between 6:45 AM and 7:15 PM.
13. On September 7, 2011, Mr. Saviola contacted Ron Maxwell, Town of Geneseo Building Inspector, to determine if Mr. Kuyon had been cited by the Town for any violations of any local laws or ordinances as they pertain to the use of the propane cannon at the farm operation. Mr. Maxwell indicated that the Town had no records of any violations relative to the Kuyon farm property. In addition, Mr. Maxwell indicated that neither the Town of Geneseo, nor Livingston County has a noise ordinance applicable to farm operations.
14. On September 15, 2011 Mr. Saviola met with Mr. Bill Weber, Code Enforcement Officer for the Town of Livonia, to determine if his office received any complaints

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pertaining to the use of the propane cannon on the Kuyon property. Mr. Weber indicated that on or about September 1, 2011, he received a call from the complaining neighbor regarding the utilization of the propane cannon on the Kuyon property. The Kuyon property is located in the Town of Geneseo, bordering on the Town of Livonia. Mr. Weber informed the complaining neighbor that the Town of Livonia does not have a noise ordinance applicable to farm operations.

15. On September 20, 2011, Mr. Saviola contacted Mr. John Brahm, owner of Arbor Hill Winery in South Bristol, NY (Ontario County), for the purpose of determining if the use of a propane cannon is common among grape growers in the Finger Lakes Region. Mr. Brahm has over 40 years of grape growing and wine making experience in the Finger Lakes region. Mr. Brahm indicated that propane cannons have been used to scare birds from vineyards for at least 25 to 30 years. The use of a cannon during the grape harvest season, which is variety-specific, typically occurs from August to mid-October. According to Mr. Brahm, it is more effective to commence firing the cannon before fruit (grape) predation begins. It is common practice for grape growers in the region to commence the use of the cannon along with other scare devices 2 to 3 weeks prior to the varieties ripening which is when the majority of grape predation begins. According to Mr. Brahm, grape predation is variety- specific and region-specific. Propane cannons are moved to protect individual grape varieties ripening at different times during the growing season and are moved also to confuse birds.
16. Deer Run Winery is located in the Western-most portion of the Finger Lakes region and is located in a semi-rural/agricultural region of Livingston County. The closest production winery is located approximately 7.5 miles southeast of the subject property. According to Mr. Brahm, being the only vineyard in the area, the vineyard at Deer Run winery represents the choicest meals for nuisance wildlife. Mr. Brahm indicated that crop damage and pressure from predators increases due to a lower concentration of ripe grapes in the area. In this instance, damage tends to be more localized and is likely to be more severe.
17. Mr. Saviola asked Mr. Brahm about the practicality of using netting to protect ripening grapes from bird damage. Mr. Brahm indicated that the use of netting is very costly and very labor intensive. Mr. Brahm indicated that it has been his experience that netting is not entirely effective because starlings and robins will still penetrate the protective netting and leaf canopy, and easily access and cause damage to ripening grapes.
18. On September 20, 2011, Mr. Saviola contacted Dr. Paul Curtis, Extension Wildlife Specialist at Cornell University's Department of Natural Resources to inquire about common bird damage control methods typically employed by grape and tender fruit growers in New York State. Dr. Curtis provided information on the potential crop loss due to bird damage, the cost of using netting to control bird damage, and propane cannon firing intervals. According to Dr. Curtis, an average annual crop loss of approximately

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10% can occur as a result of bird damage in unprotected grapes and a high crop loss would be 20 to 30%. Dr. Curtis recommended firing intervals no less frequent than every three minutes. Dr. Curtis also referred to a brochure titled "Birds," prepared by Paul D. Curtis and Michael Fargione of the NYS College of Agriculture & Life Sciences at Cornell University. This brochure indicates that ripening soft fruits are highly susceptible to bird damage. The brochure describes netting as "the most effective method for controlling bird damage." The brochure also indicates that there are high labor costs associated with the installation and removal of netting, and that this method is usually cost-effective only for the most valuable fruit crops. The authors, Curtis and Fargione, explain that a combination of control methods including distress calls, cannons, and visual devices provide better protection than one single control method. They also indicate that scare devices must be used from shortly before sunrise until sunset for adequate crop protection.

19. A fact sheet of the Ontario Ministry of Agriculture, Food and Rural Affairs¹ includes a statement that "[u]nchecked, 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.
20. Information in the Ontario fact sheet indicates that birds do not react nearly as much to visual deterrents as they do to acoustical ones. It further indicates that visual deterrents are usually add-ons to acoustical systems and visual deterrents rarely provide sufficient protection by themselves. The Ontario Ministry recommends an integrated approach to controlling bird damage, including:
 - Using a combination of scaring methods that affect the bird's sense of sight and sound and create a sense of fear;
 - Position devices along the perimeter of the area to be protected, near trees and at entry areas.
21. The Ontario Ministry fact sheet indicates that "Although the loudness of the blast is important, it is the unexpected nature of the blast that keeps birds nervous. Units should *never* blast at intervals of less than 3 minutes. Birds quickly get accustomed to units that are stationary, shoot at regular intervals, or fire very rapidly."²

¹ 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.

² Id, at page 5.

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22. The Ontario Ministry fact sheet contains a recommendation that growers get an early start on their control program. “Bird control equipment *must* be in place at least 10 days before the crop is attractive to the birds, usually when it is coloring, softening, sweetening, depending on the crop. For early control, propane-fired cannons...should be set to run infrequently. This might be an interval average of 10 minutes for the randomized firing/sound sequences. For a typical control season of 8 weeks, the interval average should decrease about 1 minute per week. However, as stated earlier, the interval average should never be less than 3 minutes, since this would reduce the equipment’s effectiveness.”³ Dr. Curtis indicated that generally a 5-10 minute interval seemed reasonable to protect a grape crop from birds; however, it is very site specific.
23. On November 15, 2011, Mr. Saviola contacted the Livingston County Department of Health, Division of Environmental Health, to determine if any noise complaints had been filed related to the use of the propane cannon at Deer Run Winery. Mr. James Mazurowski, Director of Environmental Health, reviewed his agency’s files and indicated that he did not find any record of a complaint being filed or any information pertaining to Deer Run Winery.
24. Agriculture and Markets Law §308(1)(b) requires that the Commissioner consider whether an agricultural practice is conducted by a farm owner or operator as part of his or her participation in the Agricultural Environmental Management (AEM) program as set forth in Agriculture and Markets Law Article 11-A. On September 7, 2011, Mr. Saviola contacted Mr. Robert Stryker, District Manager at the Livingston County Soil & Water Conservation District (SWCD) to determine if Deer Run Winery participates in the Agricultural Environmental Management program. According to Mr. Stryker, Deer Run Winery does participate in the Agricultural Environmental Management program.

Findings

Based upon the facts, information and circumstances described above, and in consultation with the Advisory Council on Agriculture; the New York State College of Agriculture & Life Sciences at Cornell University; and the Sound Agricultural Practice Guidelines⁴ by which agricultural practices are evaluated, I find the following:

³ Id, at page 12.

⁴ 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 & Markets in determining what is sound pursuant to §308 of the Agriculture & 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 specific weight in assessing agricultural practices.

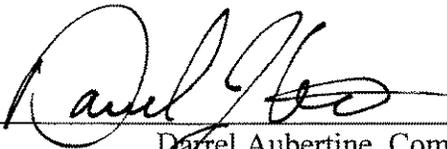
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1. The Department has found no evidence or received other information indicating that Mr. Kuyon has been cited for any violation of federal, State or local law as a result of the use of the cannon. Although the Livingston County Sheriff's office did respond to a neighbor's complaint about the use of the propane cannon, no notices of violation, tickets, or summonses were issued during, or subsequent to, the responding Deputy's visit.
2. The Department has received no evidence that Mr. Kuyon's use of a propane cannon to protect grapes from bird damage has resulted in bodily harm or property damage off the farm. A letter was sent to five neighboring landowners requesting comments on the use of the propane cannon. One response was received whereby the individual complained that the blasts from the cannon adversely impacts his and his wife's quality of life and causes stress to his pet dog. However, there was no claim rising to the level of bodily harm or property damage.
3. Mr. Kuyon's use of the propane cannon to protect his grape crop against bird damage generally achieves the intended result in a reasonable and supportable way. The firing interval settings as well as the location of the cannon appear to be warranted under the site specific conditions of this situation. While Mr. Kuyon does use visual deterrents, utilization of these alone would not achieve the protection provided by use of the propane cannon.
4. The use of a bird control method is needed to prevent damage to the grape crop at the Dcer Run Winery. Without the use of a combination of bird control methods or devices, there would be a significant adverse economic impact to the farmer as a result of the loss in crop production. The use of the cannon is a cost-effective method of protecting the grape crop.

Conclusion

Based on the foregoing and in accordance with §308 of the Agriculture and Markets Law, I conclude that, from a noise perspective, the use of a propane cannon by Mr. Kuyon for the protection of grape crops, as described above, is sound to the extent that the firing interval for the cannon is never less than three minutes, the firing interval is adjusted consistent with the amount of bird pressure occurring and the cannon is only used during daylight hours.

2/14/12
Date



Darrel Aubertine, Commissioner
Department of Agriculture and Markets