SOUND AGRICULTURAL PRACTICE
Opinion Number 97-4

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 on the Cleary property in the Town of Penfield, Monroe County.

REQUESTER: Ms. Louise Cleary
1252 Jackson Road
Webster, New York 14580

Preliminary Statement

On May 9, 1997 the Department received a request from Louise Cleary to review the soundness of an agricultural practice conducted by a local farmer, Dan Schreiber, who rents her property for production purposes. Ms. Cleary requested that the Commissioner issue an opinion as to the soundness of Mr. Schreiber's tillage practices, in relation to dust, and his use of agricultural chemicals for the production of crops. No lawsuit is pending at this time, however, neighbors have expressed concerns with pesticides being transported to their property along with the dust.

Pursuant to this request, the Department conducted a sound agricultural practice review of the use of agricultural chemicals and the tillage practices used at the property. On June 3, 1997, Department Agricultural Resource Specialist Matt Brower and Department Senior Attorney John Rusnica visited the Cleary property to gather information on the agricultural chemical use and the tillage practices.

Information Considered in Support of the Opinion

1. The Cleary property is located on Jackson Road in the Town of Penfield, Monroe County, and consists of approximately 20 acres of cropland. Ms. Cleary rents the land to Dan Schreiber, a local crop farmer. According to the Department's files, the property is not located in an agricultural district. However, according to the assessor's office for the Town of Penfield, the property received an agricultural assessment in 1996 and 1997.

2. According to Ms. Cleary, her fields have been used for the production of field crops for several years, with the exception of the 1994 growing season when the fields were left idle. Ms. Cleary indicated that she first received a complaint from her neighbors in 1995. She stated that the neighbors' home is directly across the street from the crop fields. Ms. Cleary also indicated that she received several complaints from her neighbors at planting time in 1996 and 1997.

3. According to Mr. Schreiber, the two types of agricultural chemicals used for crop production on the Cleary property are dry and liquid fertilizers and pesticides (herbicides, insecticides, and fungicides). The dry granular fertilizer is broadcasted onto the soil surface and incorporated. Dry granular fertilizer is also used to side dress the corn when it is about three feet tall, the fertilizer is placed next to the corn row and is covered with soil immediately. The liquid fertilizer is applied at planting time, it is placed into the planter and flows from the planter into the soil and is covered immediately with soil. Mr. Schreiber stated that the pesticide use involves two different methods. The herbicides are applied in liquid form using a low pressure boom sprayer. The insecticides and fungicides are applied to the seeds before sale by the seed company. Mr. Schreiber stated that he attempts to avoid conducting any field work on the Cleary property when it is windy.

4. According to Mr. Schreiber, the boom sprayer is either mounted to the tractor or pulled behind. The height of the boom on the sprayer is adjusted to apply herbicides 20 to 36 inches from the surface of the ground, depending on the timing of the application. Mr. Schreiber indicated that the herbicides may be applied prior to planting and incorporated immediately, after planting but before the crop and weeds emerge from the soil, or after the crop and weeds have emerged.

5. Mr. Schreiber stated that the insecticides and fungicides are on the seeds at the time of purchase. Mr. Schreiber empties the treated seeds from the sealed bags into the planter, the seeds flow from the planter into the soil and are covered immediately with soil.

6. According to Mr. Schreiber's records, on June 27th and 28th, 1996 the herbicides *Sonalan* and *Dual* were each applied at the rate of one quart per acre. Mr. Schreiber stated that the herbicides were applied prior to planting and were incorporated into the soil immediately. Mr. Schreiber indicated that the herbicides were applied late in the day on June 27th and during the morning hours on June 28th. Mr. Schreiber indicated that kidney beans were planted in the fields on June 28, 1996. According to the label, the beans that were planted at that time were treated with the fungicides *Captan* and *Apron,* and the insecticide *Chlorpyrifos*. No other pesticides were used at planting time. Mr. Schreiber stated that the herbicide *Reflex* was applied in a band, post emergence, at the rate of 5 ounces per acre on July 22, 1996.

7. Mr. Schreiber stated that on May 13, 1997 his employee, Michael Bebernitz, was applying liquid fertilizer with the corn planter, while planting corn, when the Town Fire Marshal, Patrick Morris, came to the site because of a complaint from the neighbor. Mr. Schreiber indicated that Mr. Morris asked that the field work be stopped because the wind was blowing towards the neighbors' property at a speed of 5 m.p.h. Mr. Schreiber stated that he told Mr. Morris that the field work was almost finished at that point and Mr. Morris agreed that the work could be finished.

8. At the time of the Department's visit, Mr. Schreiber indicated that corn had been planted and that, except for the insecticide and fungicide treatment on the corn seed, no pesticides had been used on the field. He indicated that he planned on using the herbicides *Prowl* and *Atrazine* at a later date.

9. Mr. Schreiber stated that he and his employee both apply pesticides on the Cleary property and both are certified by the Department of Environmental Conservation to apply pesticides. He also stated that he gave the complainants a copy of the labels for the herbicides *Prowl* and *Atrazine* which he planned on applying to the property this year.

10. During their visit, Mr. Rusnica and Mr. Brower met with the complainants to gather information relative to their concerns with the application of pesticides. The complainants stated that they moved into their house in 1993 and that the first time the field was used for crop production was in 1995. They also stated that their daughter was diagnosed with Crohn's disease in 1996 and is more sensitive to chemicals. The complainants indicated that they are not claiming that the pesticides are responsible for their daughter's health problem. However, they are concerned that the use of pesticides on the Cleary property may aggravate their daughter's condition. The complainants stated that in 1995, Mr. Schreiber planted beans treated with *Captan* during windy conditions and dust from the field blew onto their property. They stated that they could smell the *Captan* for weeks after the planting. They also stated that one of their daughters developed a rash and the other daughter had difficulty breathing after being exposed to the dust.

11. In a letter to Mr. Brower dated June 2, 1997 the complainants indicate that they are particularly concerned about the use of *Captan* and it's cancer causing potential. They stated in the letter that for the past two years, the fumes from the *Captan* that is used to treat the seeds has been noticeable for weeks after planting. They also stated that they have both experienced nausea and dizziness after the *Captan* has been used. The complainants also indicate in the letter that, in their opinion, it is not possible to use chemicals on the Cleary property without some of the material drifting onto their property.

12. The complainants indicated that because of the potential health hazards associated with the use of pesticides, they felt the farmer should discontinue the use of pesticides on the field closest to the road or should use organic farming practices on the Cleary property. The complainants stated that they do not have any medical documentation to support their claim that their family is experiencing health problems as the result of the use of pesticides.

13. The complainants indicated that they have not noticed any problems with drift from other pesticides used in the area, such as with the field south of their property, and they do not notice any odor from the lawn care chemicals used by some of the other homeowners in the development. They also stated that they are not informed as to

what chemicals are being applied to the lawns in their area. The complainants indicated that they do not use any chemicals on their own lawn.

14. On June 24, 1997 Mr. Brower contacted other residents in the area concerning the use of pesticides on the fields. Two of the residents indicated that they live in the development west of the Cleary property and detected an odor from the pesticides in 1996. They also stated that the odor lingered for several days. One of the residents stated that the odor made her ill. The other resident indicated she had no reaction as a result of the pesticide applications. Both residents stated that they had not detected any odor in 1997.

15. On June 25, 1997 Mr. Brower contacted a homeowner on the north side of the Cleary property. This neighbor stated that his house is within fifteen feet of one of the fields used by Mr. Schreiber. The neighbor indicated that he has not detected any odor from the pesticides used on the Cleary property and his family has not had any reaction to the pesticides. The neighbor stated there wasn't any problem with drift from the fields, because the field work is generally stopped when the dust is being blown from the fields.

16. On July 28, 1997 Mr. Brower received from Mr. Schreiber a copy of his pesticide applicator I.D., as well as a copy of the I.D. for one of his employees, Jeff Bixby. Mr. Schreiber also provided Mr. Brower with copies of his pesticide application records for the Cleary property for 1996 and 1997 and labels from the pesticides applied to the property during those two years. The information contained in the pesticide application records is consistent with statements made by Mr. Schreiber. However, Mr. Schreiber indicated during a conversation on August 8, 1997 that he had made a mistake when recording the date when the herbicide *Reflex* was applied in 1996. He indicated that it was not applied on July 22, 1996 as indicated in the records, but rather on July 15, 1996.

17. Mr. Brower reviewed the application instructions on the labels of the herbicides applied to the Cleary property in 1996 (*Sonalan*, *Dual*, And *Reflex*) and it appears that the rates and methods used for the herbicide applications during 1996, as stated by Mr. Schreiber and as shown in his records, are consistent with the instructions on the labels. Mr. Schreiber's application records indicate that the herbicides *Prowl* (1.8 qrts./ac.), *Atrazine* (0.8 qrts./ac.)and *Banvel* (.25pts./ac.) were applied to the Cleary property during the morning on June 17, 1997. The herbicides were applied postemergence. The herbicide *Permit* was applied postemergence to the property during the morning on June 24, 1997 at a rate of .89 ounces/ac. Mr. Brower reviewed the application instructions on the labels of these herbicides and it appears that the rates and methods used for the herbicide applications during 1997, as stated by Mr. Schreiber and as shown in his records, are consistent with the instructions on the labels. The *Prowl*, *Atrazine* and *Permit* labels recommend avoiding drift by not applying these herbicides during windy conditions. The label for Banvel states that

the herbicide should not be applied during gusty periods or when the wind exceeds 15 miles per hour.

18. Mr. Schreiber provided Mr. Brower with a copy of the label from the corn seed that was planted on the Cleary property in 1997. According to the label, the corn seed was treated with the fungicides *Captan* and *Metalaxyl*.

19. On August 4, 1997 Mr. Brower contacted the complainants to gather additional information relative to their experiences during the 1996 and 1997 planting seasons. One of the complainants stated that in 1996 her family noticed an odor from the treated beans throughout the summer, particularly in the evening and after it had rained. The Complainant indicated that the odor did not occur every day, only intermittently during the summer of 1996. She also stated that her family experienced nausea and dizziness as a result of the odor.

20. According to one of the complainants, odor from the Cleary property was most noticeable this year, prior to the Department's visit, about the time when Mr. Morris was called to the site. She also indicated that the odor this year has not been as bad as in the past and her family has not experienced the same health problems this year as they have in the past. The complainant stated that Mr. Schreiber did notify her as to when the pesticides would be applied this year.

21. The complainants provided the Department with several articles relative to the hazards of agricultural chemicals, particularly *Captan*. Some of the articles discuss the health hazards associated with the use of pesticides, particularly the use of *Captan* on food crops such as table grapes. This material is not relevant to the case, however, because the *Captan* and other insecticides and fungicides are not being directly applied to food crops that will be eaten, only to the seed. Some of the articles discuss the health risks to farmers and farm workers who handle the pesticides, work in fields where pesticides have been applied, or handle crops that have been sprayed with pesticides. The complainants do not have the same direct contact with agricultural pesticides as a farmer or farm worker would. The articles do not discuss the potential health risks to neighbors when *Captan* is used as a seed treatment at planting and they do not discuss the risks associated with the other pesticides and the methods of application used by Mr. Schreiber.

22. On June 9, 1997 Mr. Brower contacted Patrick Morris, the Fire Marshal for the Town of Penfield, to gather information relative to his visit to the site on May 13, 1997. Mr. Morris indicated that he had visited the site as a result of the neighbors' complaint. Mr. Morris stated that at the time of his visit the wind was blowing north to northeast at 5 miles per hour. According to Mr. Morris, the farmer was applying liquid fertilizer and was incorporating it. Mr. Morris stated that the field was dry and a small amount of dust was going across the road toward the complainants' house. Mr. Morris also stated that, in his opinion, there was no danger of anyone inhaling agricultural chemicals at that time. According to Mr. Morris, he visited the site on

July 15, 1996 as a result of complaints from the neighbors. Mr. Morris stated that, according to his records, pesticides were being applied at that time but his records do not indicate that any dust or drift problems were occurring.

23. On June 6, 1997 Mr. Brower contacted Gail Mortimer, a Department of Environmental Conservation Region 8 Pesticide Control Specialist, to gather information concerning the Department's regulations for the application of pesticides. She stated that there is no specific recommendation concerning a maximum wind speed when pesticides should not be applied. Ms. Mortimer also indicated that some pesticide labels recommend that the pesticide not be applied when wind speed exceeds 5 miles per hour. According to Ms. Mortimer the planting of treated seed is not considered an application of pesticides by the Department and is not regulated.

24. Mr. Rusnica reviewed DEC's regulations on the application of pesticides. 6 NYCRR section 325.2(a) states that:

> "Pesticides shall be used in such a manner and under such wind and other conditions as to prevent contamination of crops, property, structures, lands, pasturage or waters adjacent to the area of application."

25. According to Mr. Rusnica, pesticide applicators are not required to include wind speed or conditions in their records and reports kept pursuant to DEC's regulations [6 NYCRR section 325.25(a)].

26. On June 26, 1997 Mr. Brower contacted Ron Gardner, Senior Extension Associate for the Pesticide Management Education Program at Cornell University, to gather additional information on the particular pesticides used by Mr. Schreiber. Mr. Gardner stated that the formulation of *Captan* which is used for seed treatment is diluted and that personal protection equipment is not required for workers handling the seed because of the low risk associated with this formulation. Mr. Gardner indicated that he is not aware of any studies that have been done relative to the health risks associated with secondary exposure to treated seed. Mr. Gardner also stated that the risk of health problems resulting from secondary exposure to the seed treatment, during planting, is extremely low because the planting process is a closed system, i.e. the seed passes through a seed tube into the soil and is covered immediately. According to Mr. Gardner, there is also very little risk of secondary exposure to herbicides when they are incorporated, as was the case with the *Dual* and the *Sonalan* applied by Mr. Schreiber. Mr. Gardner stated that the best recommendation concerning drift is simply to avoid pesticide application when drift may occur.

27. On July 7, 1997 Mr. Brower contacted Dennis McFadden, Manager of Toxicology and Regulatory Affairs for Gustafson Inc. Gustafson Inc. purchases *Captan*, formulates it and resells it for seed treatment. Mr. McFadden stated that he is not aware of any published data on secondary exposure to treated seeds. He also stated that the *Captan* is dried on the seeds and the concentration used is so low that the risk

of secondary exposure due to drift is extremely low. Mr. McFadden also stated that it is unlikely that any odor from the *Captan* would be detected by the neighbors during or after planting because the seed is covered immediately by soil.

28. On September 22, 1997 Mr. Brower contacted Kevin Keaney, Branch Chief in the Certification and Worker Protection Branch at the Environmental Protection Agency. Mr. Keaney stated that the pesticide applicator should follow the recommendations on the pesticide label to avoid spray drift. He also indicated that the risk of drift is much lower when the pesticides are incorporated immediately. According to Mr. Keaney, the risk of exposure is much higher for a farmer or farm worker who comes in direct contact with pesticides, as opposed to a neighbor who's only risk of exposure is from occasional, accidental drift. He also indicated that the risk of secondary exposure to seed treatment as a result of drift is extremely low. Mr. Keaney stated that his agency has no oversight in terms of fertilizer application.

29. On September 22, 1997 Mr. Brower contacted Jim Leach, a Research Scientist with the New York State Health Department. Mr. Leach indicated that there is a risk of pesticide drift resulting in health problems. He indicated that as a result of this risk, the Health Department and the Department of Environmental Conservation have developed some informational material concerning pesticide application. The material recommends avoiding pesticide application when winds exceed 10 miles per hour or when winds are gusty.

30. On September 22, 1997 Mr. Brower received from Jeffrey Schultz, a Climatologist at the Northeast Regional Climate Center at Cornell University, climate data for the days when Mr. Schreiber was applying agricultural chemicals. The data was recorded at the Rochester - Monroe County Airport which is approximately 12 miles southwest of the Cleary property. According to the data, on June 27, 1996 the wind was from the west - southwest and none of the hourly wind speed recordings between 1 p.m. and 9 p.m. exceeded 15 miles per hour and only three of the recordings exceeded 10 miles per hour. On June 28, 1996 the wind was from the east - southeast and none of the hourly wind speed recordings between 5 a.m. and 12 p.m. exceeded 10 miles per hour. On July 15, 1996 the wind was generally from the west - southwest and only one of the hourly wind speed recordings between 5 a.m. and 9 p.m. exceeded 15 miles per hour and only five of the recordings exceeded 10 miles per hour. On June 17, 1997 the wind was from the west - northwest and none of the hourly wind speed recordings between 5 a.m. and 12 p.m. exceeded 10 miles per hour. On June 24, 1997 the wind was from the south - southwest and none of the hourly wind speed recordings between 5 a.m. and 12 p.m. exceeded 10 miles per hour.

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 and Life Sciences at Cornell; the USDA Natural Resources Conservation

Service; and the Sound Agricultural Practice Guidelines[1] by which agricultural practices are evaluated, I find the following:

1. The application of the agricultural chemicals is necessary for economical crop production. Discontinuing the land application of pesticides and fertilizers on the fields near the complainants' residence could make crop production on the Cleary property uneconomical and could result in the land being idled or permanently converted to nonagricultural use.

2. The Department has found no evidence that the application of agricultural chemicals on the Cleary property has resulted in bodily harm or property damage off the site. It appears that Mr. Schreiber has attempted to prevent dust from moving off site by avoiding conducting field work on windy days. The complainants did not provide the Department with any evidence indicating that their family has experienced health problems as a result of the agricultural chemicals used on the Cleary property. While one neighbor indicated she was made ill by the pesticide odor, none of the neighbors reported the same degree of discomfort as the complainants. One neighbor who lives within 15 feet of a field where agricultural chemicals are applied did not report any reaction to the pesticides or fertilizer. The risk of health problems resulting from secondary exposure to seed treatment at the time of planting is extremely low because of the low concentration used and because the seed is immediately covered by soil. No published research information was found relative to the potential health risks associated with secondary exposure to seed treatment.

3. Mr. Schreiber stated that he tries to avoid conducting any field work on the Cleary property when it is windy. The potential for drift is extremely low when the fertilizer is immediately covered with soil. The potential for drift is also extremely low when the herbicides are immediately incorporated into the soil, as was the *Dual* and *Sonalan* applied by Mr. Schreiber. The climate data indicates that the agricultural chemicals were usually applied when the wind speed was less than 15 miles per hour and in most cases less than 10 miles per hour. The data also indicates that the agricultural chemicals were applied when the wind was blowing away from the complainants' house. No evidence was found that Mr. Schreiber has applied any agricultural chemicals during excessively windy conditions, resulting in drift onto neighboring property. It appears that on May 13, 1997, when the complainants allege that their family noticed odors from pesticide use, Mr. Schreiber's employee

[1] 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.

was actually applying liquid fertilizer to the Cleary property. The fertilizer was covered with soil immediately and the risk of drift is minimal.

4. The planting of treated seed is not considered an application of pesticides by the New York State Department of Environmental Conservation and is not regulated. The Department has found no evidence or received other information indicating that the pesticide or fertilizer application practices as observed on the Cleary property violate state or local law, or that Mr. Schreiber has applied all of the pesticides other than in accordance with label instructions or has been cited for any violation of law or regulation in relation to those applications.

Conclusion

Based on the foregoing, and in accordance with Section 308 of the Agriculture and Markets Law, I conclude that Mr. Schreiber's tillage practices, in relation to dust, and his use of agricultural chemicals for the production of crops as described above are sound.

12-18-97
Date

Donald R. Davidsen, D.V.M.
Commissioner