RECEIVED
SEP 7 1995
DEPT. OF
COUNSEL'S OFFICE

SOUND AGRICULTURAL PRACTICE
Opinion Number 95-2

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 at Trengo Farms on New York State Route 427, Town of Chemung, in Chemung County.**

REQUESTOR: **Trengo Farms**
5229 Wilawana Road
Elmira, New York 14901

Preliminary Statement

On February 16, 1995 the Department received from Mary Trengo a formal request for an opinion, pursuant to Section 308 of the Agriculture and Markets Law, regarding the soundness of the manure management program at the Trengo farm. The farm is located on New York State Route 427 in the Town of Chemung, Chemung County. In a letter dated April 9, 1995, Mrs. Trengo clarified the request by asking the Commissioner to issue an opinion on the soundness of the farm's manure storage and application practices, as they relate to water quality. No law suit is pending at this time. However, some of the neighbors have expressed concern with the manure management at the farm.

Pursuant to this request, the Department conducted a sound agricultural practice review of the Trengo's manure storage and application practices. On April 13, 1995 Mr. Matt Brower, an Agricultural Resource Specialist with the Department, visited the farm to gather information on its manure storage and application practices. Joe Trengo showed Mr. Brower the barn where the pigs are housed and some of the fields where the manure will be applied. Joe and Michael Trengo answered a number of questions related to the manure management at the farm.

Information Considered in Support of the Opinion

1. The Trengo hog farm is a partnership owned and operated by Joe Trengo, his wife Mary and their son Michael. At the time of the field review, approximately 1,000 pigs were being housed at the farm. The farm consists of approximately 166 acres, about 97 of which are used for crop production. The crops being produced in 1995 include 46 acres of hay, 8 acres of oats, and 43 acres of corn. According to the Department's records, the farm is located in Chemung County Agricultural District #2.

2. Joe Trengo told Mr. Brower that the farm was originally a dairy farm until the cows were sold in 1986. They began raising 300 pigs between 1992 and 1993. The number of pigs housed at the farm has gradually increased since then. In March of 1995 the population increased from 500 to 1,000 pigs. The pigs are housed in the original barn, which has a new addition to accommodate the extra pigs.

3. The manure from the pigs falls through slats in the barn floor into concrete pits below. According to Joe Trengo, the pit under the original barn is 5 feet wide, 10 feet deep and 110 feet long. The manure from this pit flows by gravity into a newer pit located under the addition. Joe Trengo stated that the new pit is 41 feet wide, 8 feet deep and 126 feet long. The walls of the new pit are 8 inches thick, the floor is 4 inches thick and according to Joe Trengo, all joints in the concrete have rubber seals to prevent leaking.

4. According to Mr. Brower, no manure was being applied to the land at the time of the field visit. Joe Trengo told Mr. Brower that the farm planned to hire a custom applicator to spread the manure later in the spring. Mr. Trengo showed Mr. Brower a copy of the nutrient management plan and part of the soil conservation plan prepared by the USDA Natural Resources Conservation Service (Mr. Brower received a copy of the nutrient management plan at a later date). Mr. Trengo stated that the nutrient management plan would be followed when the manure was applied to the land.

5. During the tour of the farm, Mr. Brower observed that strip-cropping is currently being used on the steeper slopes that will be receiving manure.

6. On May 15, 1995, Joe Trengo informed Mr. Brower that the farm hired the Environmental Fertilizer Corporation (EFC) from Watertown New York to custom apply the manure during the first week in May. Mr. Trengo stated that all of the manure was applied according to the nutrient management plan and was incorporated into the soil within 24 hours.

7. According to Joe Trengo, the nutrient management plan will need modification in the future, depending on a number of factors including how much manure the pigs actually produce. Mr. Trengo stated that they realize additional land may be needed in the future for manure application and they are currently investigating the availability of such land.

8. Joe Trengo told Mr. Brower that some of the neighbors are concerned that the manure storage and application could result in water contamination. He stated that water testing of some of the wells in the area, completed by the Health Department prior to Mr. Brower's visit, revealed that a neighboring well located approximately 500 feet southeast of the farm has a high nitrate level.

9. On April 26, 1995 Mr. Brower contacted one of the neighbors concerned about the operation. According to this neighbor, their property is approximately 500 feet southeast of the Trengo farm, on the opposite side of the road. The person stated that they are concerned about water quality and dust problems resulting from the pig farm. The neighbor stated that the Trengos have not been spreading the manure from the new facility, but some spreading had occurred last fall. This person stated that the only problem they have encountered to date was that last fall the Trengos continually applied manure to the same area of a field across the road from the neighbor's property[1]. The neighbor stated that cow manure was also spread in this field. According to the neighbor,

[1]Joe Trengo informed Mr. Brower that the manure spreading in this field last fall was conducted by a local dairy farmer and not the Trengos.

this field is adjacent to the property that contains the well with the high nitrate level, along with the well that supplies the water to their house. One of the neighbor's concerns is that Alan Horwath, District Conservationist for the USDA Natural Resources Conservation Service, stated that soil tests indicate that the phosphorus and potassium levels on the Trengo farm are high.

10. On April 27, 1995 Mr. Brower contacted another neighbor concerned about the Trengo farm. This neighbor stated that their concerns are water quality and public health. This person's property is located approximately 500 feet southeast of the farm, on the same side of the road. The neighbor indicated that they have two wells on their property. One of the wells contains the high nitrate level and the other supplies water to their house and the house across the road. The neighbor stated that they have about 12 horses on their property. The neighbor told Mr. Brower that the manure from the horses is stored/piled approximately 250 feet away from each well.

11. On May 17, 1995 Mr. Brower contacted Joe Van Schaick from EFC. He was the custom applicator hired to spread the manure during the spring of 1995. Mr. Van Schaick stated that the manure was applied during the first week in May, according to the nutrient management plan, and was immediately incorporated by plowing the material into the soil. Mr. Van Schaick stated that he was able to calibrate his equipment to achieve the rate of application required by the plan, which was approximately 2,000 gallons per acre.

12. On May 17, 1995 Mr. Brower contacted Floyd Helm, the contractor that built the manure storage pit under the new addition. Mr. Helm stated that all of the joints in the concrete have rubber seals to prevent leaks, and all of the walls were constructed with reinforcement bars in the concrete.

13. On May 18, 1995 Mr. Brower contacted Randy White from Tri-County Confinement. Mr. White stated that Tri-County Confinement provided the plans for the manure storage pit under the new addition. According to Mr. White the plans were not designed by an engineer. Mr. White stated that he is not aware of any leaks developing in the pits when they have been constructed according to their design.

14. Mr. Brower contacted Alan Horwath, from the Natural Resources Conservation Service, on May 17, 1995. Mr. Horwath confirmed that the plan was developed based on the nitrogen needs of the crops grown on the farm and the knowledge that the soils were high in phosphorus and potassium. Mr. Horwath stated that strip-cropping and other erosion control practices are being used on the farm to reduce runoff.

15. Mr. Brower contacted Tom Kump, from the New York State Department of Health in Chemung County on May 19, 1995, to confirm the water sampling conducted in the area. Mr. Kump stated that the Health Department did sample a number of wells in the vicinity of the Trengo farm between March 17, and April 10, 1995. Mr. Kump stated that 11 wells were sampled. Only one of the wells had high level of nitrates (16.8mg/L). This well is not used as a residential water supply. Mr. Kump stated that a large manure

pile was within 30 feet of the well. Both the well and the manure pile are on a neighbor's property.

16. According to the Delaware Guidelines ~ Manure Management For Environmental Protection[2], proper use of animal waste as a nutrient source involves determining:

- the nutrient value of the manure;
- the soil nutrient level;
- the nutrient needs of the crop that will be produced; and
- the manure application rate needed to raise the soil nutrients to a level adequate to satisfy the crop requirements (commercial fertilizer application rates are determined based on the manure application).

17. Many farmers apply more phosphorus and potassium than is needed by the crop, according to Beegle[3]. He points out that the movement of these nutrients into surface water can occur as a result of runoff and erosion. This is the principal environmental impact associated with the over application. Soil and water conservation practices can control the loss of excess phosphorus and potassium.

18. Mr. Brower contacted Dr. Harold Van Es and Dr. Stu Klausner of the Soil, Crop and Atmospheric Science Department at Cornell University. Dr. Van Es stated that ground water loading with phosphorus can only occur if the soil is saturated with the nutrient, and this situation is very rare. He also stated that there is not an environmental concern associated with the over application of potassium, as it relates to ground water loading, because it does not move much in the soil. According to Dr. Klausner, the soils in New York are typically high in phosphorus and have a good potential for storing this nutrient. Dr. Klausner informed Mr. Brower that environmental problems associated with phosphorus can be prevented through the use of erosion control practices.

19. On July 27, 1995 Mr. Brower contacted Colleen Donovan, an Environmental Program Specialist at the Department of Environmental Conservation Region 8 office. Ms. Donovan stated that there files do not contain any record of water quality violations at the Trengo farm.

---

[2] Delaware Guidelines ~ Manure Management For Environmental Protection. 1992. Mary Pritchard, editor. Delaware Cooperative Extension Bulletin #27. 14p.

[3] Beegle,D. "Farm Nutrient Management Issues". In: Liquid Manure Application Systems Design, Management , And Environmental Assessment, Proceedings from the Liquid Manure Application Systems Conference. NRAES Publication NRAES-79 Ithaca, NY. 1994. 80p.

Conclusion and Opinion

Based on 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 Science; the USDA Natural Resources Conservation Service; and the Sound Agricultural Practice Guidelines by which agricultural practices are evaluated, I hereby conclude, pursuant to Section 308 of the Agriculture and Markets Law, that:

1. **The Manure Management Practices on the Farm are Necessary** - Storing the manure until it can be land applied during favorable weather conditions and when the crops can take advantage of the nutrients in the manure is a superior method of manure management on the Trengo farm. In this case, other alternatives, such as daily spreading, have a greater potential for creating water quality problems and other adverse off-farm effects.

2. **The Department has not found any evidence that the Practice Causes Bodily Harm or Property Damage off the Farm** - None of the people interviewed cited any examples of bodily harm or property damage off the farm. The only off farm concern, the high nitrate level in one neighboring well, can be attributed to a horse manure pile as opposed to the Trengo farm.

3. **The Practice Does Achieve the Results Intended in a Reasonable and Supportable Way** - The manure storage facility is adequate for storing the manure until it can be properly applied to the land. The land application of the manure, according to the nutrient management plan, and timely incorporation into the soil allows the crops to utilize the nutrients in the manure. The Trengos are using the most current information available to utilize the nutrients in the manure, while reducing the risk of negative environmental impacts.

4. **The Practice is Legal** - The Department has found no evidence or received other information indicating that the manure management practices as observed on the Trengo farm violate any state or local law or regulation. To the best of the Department's knowledge, the Trengos have not been cited for any violation of law or regulation in relation to their manure management practices.

Based on all of the forgoing information, I conclude that the manure storage and application practices on the Trengo Farm as described above are sound.

9-7-95
Date

Richard T. McGuire
Commissioner