First, let me thank you for your time.

Many of these questions I have already replied to in previous questionnaires from your organization. However, I will establish my responses with more clarity than my prior answers.

Further, I want to preface by stating that my answers are largely not yes or no; thus, when they are published, they absolutely cannot be simplified beyond the text I have written here. The issues you have raised in this questionnaire are exceedingly complex and not black-and-white, and I believe it does injustice to the agricultural community to provide less than fully contextualized responses. I will be paying attention to the media to ensure that my positions are not simplified in such a manner.

Thanks again.

~Ben McCullough
Candidate, Ohio House of Representatives, 74th District

1) Do you support a statewide moratorium, as proposed in SB 230, on the approval of any new concentrated animal feeding operations?

Large-scale industrial farms currently pose a number of threats for the family farmer. These conglomerates have the ability to close generations of hard work and superior quality from a fair opportunity at market. In addition, as we have seen with Buckeye Egg to our south, many so-called “megafarms” are notorious for triggering environmental damage and health risks to the local population.

Recent legislation, however, has put productivity before people by taking regulating and approval authority from the township trustees, and giving it to State agencies (see HB 152 and SB 141). This has allowed new megafarms such as a multi-million unit chicken operation, to be proposed in our own backyard. First, megafarms which already exist must be held accountable to meeting or exceeding environmental standards and health- safety guidelines, because they are vital in all these ways to keeping our region clean. Senate Bill 230, sponsored by Senator Roberts of Montgomery County, created this bill to stop new CAFO’s (Concentrated Animal Feeding Operations) from locating in Ohio, specifically livestock facilities. Restrictions within the bill that I agree with include a requirement for a permanent facility to house manure or any treatment of the product, and that no livestock farms may be located within 2 miles of a cemetery, church, hospital, nursing home or school. These provisions will ensure that if these farms do locate within our area, there are a new set of provisions which must first be agreed to and implemented.

But let me be very clear: when deciding on proposals to bring a new megafarm to our district or Ohio as a whole, I will never let a possible economic opportunity to

outweigh the health and environmental guarantees that the people of Northwest Ohio deserve. It is every Ohioan's right to clean air and a largely odorless environment.

People will not want to live next to an area that houses a large-scale industrial farm, thus, property values will decrease and a wide range of side-effects, such as sharp decreases in school funding, will result. I will not allow the way of life of the Northwest Ohio family farmer to be compromised when they have lived peacefully side-by-side our citizens for generations.

Overall, in response to your question, I feel there is room for improvement in areas such as research. We need to look into guidelines set and see that they are being enforced and followed properly by the Ohio EPA and other agencies. And as always, we must take into account the opinions and experiences of those who reside in the vicinity of one of these operations, creating a decision that is fair to both the farm and the citizens of the same region.

2) **Should state monies go toward the promotion and/or recruitment of large-scale industrial agriculture in Ohio?**

This should certainly not be a top priority in Ohio. Although we wish to be working with industries in general and promoting their causes (for job growth, increased economic base, etc.), state monies are not needed to promote or recruit more large-scale industrial agriculture in Ohio. My Innovative Economy plan supports bringing industries that will enhance the way of life for Northwest Ohioans by a marriage of existing agriculture and industry, using forms such as ethanol and biomass fuel production through renewable power as means of production. These are the futuristic kind of industries that can make Northwest Ohio a leader, and that we should be working to attract, not more CAFOs.

3) **Should state monies go toward the promotion and/or recruitment of small-scale and/or organic agriculture in Ohio?**

I believe that these, especially organic agriculture, fit into my vision for the Innovative Economy. It is about attracting the industries and agricultural bases of the future to Northwest Ohio. Organic agriculture is a growing industry, and has massive global potential because so many nations around the world will only purchase from the United States if certain chemicals are not used, or if crops are not genetically altered. By producing organic foods, we also lessen dependence on chemicals, which can produce negative environmental consequences (even though many are unintentional). This says a lot about Northwest Ohio values and caring for the health of our communities.

4) Should the state legislature's decision to take away all local control over the "siting" of CAFOs be overturned?

The state legislature in Ohio should support local control over the possible expansion or creation of a new CAFO in their area. However, the decision to overturn the current law is not up to the state legislature: that is not part of something the legislature can control. Legally, the only option is for Ohio's judicial system, and ultimately the Ohio Supreme Court. The court system is the way for citizens with grievances to argue that a law created by the legislature in the past is unconstitutional, and thus, must be struck from the law books, so to speak. This is due to the Ohio law of ex post facto: once a law is in place, the legislature cannot overturn its own law. It is just legally impossible, and candidates who have been pledging to overturn certain laws are not in touch with the reality of Ohio's legal workings. With that said, for future reference, as a legislator I will work hard to ensure success of our family farmers, and will strive with every legislative action to maintain local control in as many ways as possible.

5) Do you believe the CAFO permitting process should be conducted by the Ohio Department of Agriculture?

Local involvement is crucial in CAFO permitting, because no one knows better than the local citizens what the implications of a CAFO would be for them. However, the job of the Ohio Department of Agriculture should certainly be an oversight role in this activity. I believe that local governments, trustees, county commissioners, and local Environmental Protection Agencies should work in concert with the Department of Agriculture on this important task.

6) Do you believe that air quality emissions by CAFOs should be regulated?

This is a worthy goal to pursue in the future; however, at the present time the technology to regulate such emissions does not exist. Research is vital in the initial stages of legislative action.

Dr. Peter S. Thorne at the University of Iowa, in his article "Chapter 3.0 Air Quality Issues," writes a statement that is consistent with my feelings on this topic: "Air quality data for CAFOs are quite limited. There are relatively few monitoring programs for large-scale livestock production compared to other industries that are regulated. This is further complicated by the fact that the air emissions from CAFOs include a wide array of toxicants including gases, vapors, odoriferous compounds, particulates, and bioaerosols. There are no federally mandated monitoring programs in the United States and only a small number of states have instituted their own monitoring. Efforts to institute local controls have generally focused on sitting, set backs and zoning rather than compliance with standards of hazardous air pollutants. In Europe, the situation is different. For instance, the Netherlands has established programs based on manure handling practices and for control of emissions from CAFOs. Initially these covered only intensive livestock producers, but now these regulations will extend to all farms. The

European Union has issued a number of directives designed to limit emission of ammonia, methane and odors.

"The majority of the monitoring and exposure data available has come from academic researchers interested in characterizing the emissions either for studies of occupational and community health or for studies to address emission rates and efficacy of control approaches. Recently, citizens and citizen groups have begun setting up their own hydrogen sulfide monitoring as a means to provide exposure data to the debate over CAFOs. The swine industry has not engaged in monitoring of air emissions in the United States except when required by court settlements or regulatory action…

"While there are real time monitors available for some (e.g. Jerome meters for hydrogen sulfide) most compounds are determined using GC-MS or HPLC-MS methods on air samples collected in impermeable bags or by extraction or purging from collection media. Some vapors, such as ammonia, exist at significant concentrations in both the vapor phase as well as adsorbed to particulate matter. For quantification of these compounds, it is necessary to assay for both the solid and vapor phase. This can be accomplished with annular or honeycomb denuders that collect the vapor phase by reaction with citric acid and the particulate phase by analysis of material deposited on air sampling filters. Of the multitude of compounds in this mixture, those most commonly measured are ammonia, hydrogen sulfide and methane.

"Methods are well established for characterization of the odor threshold of an air sample… Odor thresholds are quantified using an olfactometer and a panel of smellers. These panelists are non-smoking adults that ate carefully selected and trained according to ASTM Special Technical Publication 758 Guidelines for Selection and Training of Sensory Panel Members. Eight panelists sniff a two-fold serially-diluted odor sample as it is discharged from one of three ports. The other two ports deliver clean air. The panelist must select which of the randomly assigned ports is the sample and declares whether the selection is based upon recognition, detection, or a guess. The panel them samples the odor at a two-fold higher concentration. Analysis of results from the panel utilizes the triangular forced-choice method in an ascending concentration series…

"While methods are established for monitoring concentrations of all these compounds, little monitoring has been done in the vicinity of CAFOs. However, occupational health studies have characterized exposures within animal houses. Quantifying odors has relied on [human] olfactory… In addition to direct effects on humans, greenhouse gas emissions and volatization and environmental deposition of ammonia are air quality concerns from CAFOs" ("Chapter 3.0 Air Quality Issues.")

I have done research and contacted officials from The University of Iowa, Iowa State University, University of North Carolina, University of Missouri, Texas A&M University, the United States Department of Agriculture, and even groups against these farms. They all agree that we lack the technology to do this at the present time, but we should make it a long-term goal to move forward on how to begin regulating such emissions.

For more information, please see my response to question 8 below.

7) Should issues such as quality of life, effects on local infrastructure, and depreciation of property values be addressed in the permitting process?

The key here is that terms like "quality of life," "effects on local infrastructure," and "property values" need to be concisely and clearly defined first to avoid creating a legal disaster. For "quality of life," a definition could encompass almost anything, and needs to be strictly laid out. For "effects on local infrastructure," I can see the effect of roads being worn down my trucks transporting animals and eggs, but perhaps the effect would be equivalent to transportation of steel if a steel plant was located in Northwest Ohio, rather than a new CAFO. The burden goes onto industry. And as for "property values," I believe it is a given to take these into account; but again, set a standard of what the effect would be, and how much of an effect is permittable and allows no significant detriment to the local community as a whole. Overall, once these terms are clearly and strictly defined with fair perameters, then we must create a team of researchers to work in partnership with farmers and the larger agricultural community to determine other factors besides the three you have listed. The key is this: I want to do everything I can to support the family farmer; and for all CAFOs, they must be held to all the regulations and to the highest standard of conduct before they are approved, and continue to be monitored to follow their agreements once in the area.

8) If elected, what role do you hope to play in the recruitment, permitting, regulation, and oversight of CAFOs in the State of Ohio?

Agriculture in Ohio faces attacks and obstacles from every front, not a single one. Tensions run deep, and at times some partially disregard historical context. It is only the first step to identify the problems. But now, solutions must be bred through context in a rational and unbiased manner. Through this statement I will utilize extensive research to identify what I believe to be the root concerns we face, present factual contextual analysis, and from this provide solutions as they have been proven effective elsewhere for application in Ohio. I will close with the implications of this research in my job as your next state representative.

Let me preface my research with a summary of my logic. CAFOs, or Concentrated Animal Feeding Operations, have become a permanent fixture in Ohio as an agricultural state. Their detriment to family farms has expelled traditions; I believe anything detrimental to the American Dream must be prevented, or regarded with the highest degree of caution. However, it does not make sense to punish law-abiding operations that currently reside here. The Ohio Legislature cannot create laws that are ex post facto; meaning, it is impossible to add new restrictions or retroactive punishments as a legislator. Ohio law provides that the only such "retroactive punishment" can come through the workings of the state judicial system, if they deem there to be a past inconsistency of a law with the state constitution. Simply put: once a law is in place, the legislature cannot overturn its own law. It is just legally impossible, and candidates who

have been pledging to overturn certain laws are not in touch with the reality of Ohio's legal workings. With that said, for future reference, as a legislator I will work hard to ensure success of our family farmers, and will strive with every legislative action to maintain local control in as many ways as possible.

Below I have identified several sources that identify historical context, and solutions within that context, that I find to be unbiased, fair, and consistent with my beliefs on CAFOs and their overall acceptance and regulation.

First, this partial article is taken from the "Precautionary Moratorium on New Concentrated Animal Feeding Operations" by the American Public Health Association:

"Industrial farms can take simple steps to control the amount of dust they give off, such as spraying water over the cattle pens which can cut dust in half. Natural barriers such as trees can reduce odor, or even machinery such as wet or dry scubbers can be effective. So clearly, the problem isn't a lack of options, but rather that factory farms are often only willing to do the bare minimum to meet what are already fairly loose federal government and state pollution standards. According to Dr. John Sweeten of Texas A&M, 'the [livestock] industry has designed facilities to meet minimum standards. They have not adopted the best technology appropriate for a given site.'

"Federal and state governments also possess the tools to improve air quality for residents near factory farms - by enforcing or even tightening regulations on air pollution - if they chose to. But surprisingly, there has never been a thorough study of factory farm emissions. Even more shocking is the Environmental Protection Agency's initiative to grant large scale farms a two year immunity from air pollution regulations in exchange for their participation in a new air quality sampling study.

"As helpful as the new data collection may be, there's little reason to halt the enforcement of air pollution laws in order to collect it. In fact, the federal Clean Air Act already requires facilities to provide data on their emissions. According to Michelle Merkel, a former staff attorney for the EPA during the Clinton years, a halt in air pollution law enforcement on factory farms will only further endanger the public health.

"Even if factory farms were properly regulated and air pollution was monitored, these large industrial factories would remain unhealthy for people, animals and the environment ("Learn More: Air Pollution," 2006).

This passage is contributed by the State Environmental Resource Center in Madison, Wisconsin:

"Studies conducted have suggested a number of alternatives to combat odor, including animal diet manipulation, chemical additives to mask the odor, and various land application techniques. Due to the complexity of issues surrounding odor regulation, states have taken a number of approaches to deal with offensive odors, mainly through directly regulating odor, or by indirect methods that include setbacks and permits.(1)

Adding to the complexity of odor legislation is the existence of 'Right to Farm' laws in many states. The 'Right to Farm' laws protect agricultural operations from nuisance complaints under normal operating conditions, including normal odors associated with farms. However, most farms are no longer simple family farms, but CAFOs, causing some to question their right to protection under this law" ("Issue: Regulating Air Emissions from CAFOs," 2003.)

This historical and insightful piece is from the Economic Research Service of the United States Department of Agriculture. It is written by Marc Ribaudo and Marca Weinberg:

"Air quality is protected primarily through the Clean Air Act and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The Clean Air Act sets limits on how much of a pollutant can be in the air anywhere in the United States. When the air quality standard for any of six air pollutants is exceeded, States must inform the U.S. Environmental Protection Agency (EPA) how they plan to respond. Any farm in a nonattainment region (regions where air quality standards are exceeded) found to be a 'major source' of regulated emissions could be required to apply for and comply with an operating permit. CERCLA requires facilities to report to EPA when more than a 'reportable quantity' (100 pounds in a 24-hour period) of a hazardous substance is released.

"Regulation of air emissions under the Clean Air Act and CERCLA has focused on such sources as factories and cars but not on emissions from agriculture. Part of the reason is a lack of information about the sources and effects of agricultural air emissions that would be necessary to develop regulations. Pollution from agriculture generally has characteristics that make it difficult to control through conventional policy tools that are applied to industrial sources. Agricultural emissions tend to be generated diffusely over a broad land area, rather than from a single pipe or smokestack, so it has not been cost effective to accurately monitor emissions from individual agricultural sources using current technology. For example, ammonia emissions from an animal operation can come from a barn, manure storage structure, and field. The difficulty and cost of monitoring agricultural pollution sources is one reason that agriculture is largely exempt from environmental regulations that were primarily designed to address urban and industrial air pollution problems.

"However, new State regulations may seek to reduce air emissions from agriculture, particularly from animal feeding operations. Under the Federal Clean Air Act (and its amendments), States are responsible for achieving the air quality standards established by EPA. Recent lawsuits, court decisions, and consent agreements have induced States to start regulating emissions. California is the first State where air quality regulations are significantly affecting agriculture. Ozone and particulate levels in the San Joaquin Valley of California, which has some of the most polluted air in the country, with nonattainment areas for both Federal ozone and particulate matter standards, have led to new requirements for agricultural producers. Farmers must develop management plans showing how they will reduce dust, the burning of crop residue (e.g., rice straw, orchard

trimmings) is restricted, and large dairies must manage their manure to reduce ammonia emissions.

"However, farmers do not bear the cost alone. USDA helps farmers in California's nonattainment areas with a cost- share program funded through the Environmental Quality Incentives Program to help finance farming practices that reduce airborne dust and ozone precursors. USDA also funds research to understand the processes of air pollution emissions from agricultural operations, to develop and test control measures, and to provide decision aids that can be used to reduce agricultural air pollution emissions.

"Information on environmental emissions from production practices would improve coordination of environmental policies. The National Academy of Sciences review of air emissions from animal feeding operations found that, while pressure to regulate air emissions from animal operations has mounted, the basic scientific information needed for effective regulation and management of emissions is lacking. The study was requested jointly by EPA and USDA to assess the state of knowledge and to recommend steps for bridging the information gap that is hindering the development of effective regulations and management measures. Existing data are insufficient to establish thresholds for emissions from livestock operations that would trigger compliance with air quality requirements.

"This need for better data about air emissions from animal feeding operations has led to an innovative agreement between EPA and some sectors of the animal industry to monitor air quality on farms. The Air Emissions Consent agreement and National Monitoring Study between pork and egg producers and EPA calls for a 2-year national air monitoring study on animal feeding operations that agree to participate in the study. The study will use state-of-the-art technologies and standardized procedures to monitor emissions from barns and lagoons. These data will help State and Federal regulators and farmers identify farm sizes and manure handling systems that exceed thresholds for regulated pollutants. For farms that participate, EPA has agreed to provide certain legal protections for past and current emissions violations. EPA has invited other sectors of the animal industry (broilers, dairy, and fed beef) to participate.

"The information gathered during the study will be valuable for both farmers and regulators. Many producers are not aware of their operation's contribution to emissions or whether they are subject to existing air quality regulations. Knowing the legal and financial risks for different types of operations would help farmers make decisions about reducing emissions to protect them from possible lawsuits or enforcement actions and still remain profitable" ("Improving Air and Water Quality Can Be Two Sides of the Same Coin," 2005.)

I found this passage to be perhaps the most closely linked to my thoughts on CAFOs and the future. It is written by V.P. Aneja, W.H. Schlesinger, D. Niyogi, et al. The article was published for EOS, Transactions, American Geophysical Union:

"Agricultural air quality is an important emerging research area with significant multidisciplinary components. Agriculture, forest, and range production practices are increasingly subject to U.S. state and federal regulations intended to protect air resources. However, data on agricultural emissions of regulated pollutants or nuisance odors and fugitive dust often either do not exist or are insufficient to inform the development of appropriate policy.

"Agricultural operations face regulatory challenges in the U.S. in permitting, enforcement, and compliance. Uncertainties are associated with U.S. federal operating permits (issued pursuant to Title V of the federal Clean Air Act) for pollutant sources and in emissions inventories for animal feeding operations. Some uncertainties are associated with monitoring and measurement methodologies, unresolved standards for dispersion and transport models, the lack of accurate emission factors (average emission rate of a given pollutant for a given source relative to units of activity), and a need for process-based emissions model (mechanistic model of agricultural emission processes), and transport/transformation models [*National Research Council*, 2003].

"These issues are further complicated by the need to consider abatement strategies, compliance costs, and emissions reductions associated with best management practices and best available control technologies, including how to innovate policy so that new technology is accepted by the producers.

"The demand for agricultural operations to comply with air pollution regulations is often perceived by agricultural producers as inappropriate and unfair, threatening the economic viability of rural and agricultural communities and regional economies, and perhaps the overall production of food by the U.S. agricultural economy. There is a clear need for scientific research that addresses agricultural air quality problems and informs the development of appropriate regulatory policies.

"The lack of information – and the need for it – on emissions from animal operations and their effects was illustrated, for example, by a 20 July 2003 *Raleigh News and Observer* article about a company considering building a large CAFO about 10 miles from North Carolina's largest wildlife refuge. The article detailed immediate opposition to the project because of the potential for air quality problems in the refuge. Supporters of the project highlighted the potential for the CAFO to give a significant economic boost to an economically depressed region.

"Without sufficient, reliable data, decisions about building a CAFO cannot always be based on sound scientific data, and the permit decision could be based primarily on considerations other than science. The information gap could exist anywhere a new CAFO is proposed. Addressing such information gaps requires research, outreach, and

partnerships between academics, federal and state governments, industry, and public interest groups…

"However, limited data exist for estimating agricultural emissions of air pollutants, such as ammonia, or of public nuisances, such as odors and fugitive dust. Credible estimates of air emissions from CAFOs are also complicated by factors that affect the amounts and dispersion of emissions in the atmosphere. Such factors include the kinds and numbers of animals involved, their diets and housing, the management of their manure… topography, climatic and weather conditions, and actions taken to mitigate emissions and their effects. Emissions estimates generated for one set of conditions of for one type of CAFO may not translate readily to others.

"Much of the science related to agricultural air quality has grown out of the synthesis of specialized field measurements that were developed for urban air quality monitoring. The resulting Federal Reference Methods may inaccurately estimate emissions from agricultural sources.

"Measurement protocols and instrumentation, including remote sensing to measure and characterize particulate matter and gases for CAFOs, within field/facility and at edge-of-the-field/facility boundaries, are important components of an integrated agricultural air quality discussion. Studies of fine (<2.5 micron diameter) and coarse (2.5-10 micron diameter) particulate matter emissions and evaluations of techniques for monitoring and characterizing odors and aerosols are in demand by the scientific and regulatory communities.

"Research is also needed on the fate and transport of gases and particulates, especially of particular nutrients or particulate matter that could become important air emission components. Field measurements and modeling analyses are needed to estimate deposition of nitrogen and sulfur compounds in the vicinity of CAFOs. Improved coupled multimedia (air, water, soil) models are needed to predict movements and dispersion of air pollutants. Studies of methods for reducing emissions of gaseous and particulate air pollutants and for developing best management practices and best available control technologies are critical for technology transfer from research to application…

"Insufficient scientific knowledge about nitrogen, volatile organic compounds, sulfur, and particulate matter emissions from intensively managed agriculture and the ultimate fate of these compounds are directly comparable to the situation in the 1980's with regard to agricultural nonpoint sources of nutrient contamination of water. There is just enough information for researchers and policy makers to recognize a serious problem, but not enough information for them to understand the extent of the problem or to make scientifically credible recommendations about potential solutions, which may ultimately influence air, soil, and water quality, human health, and the economy of agricultural regions.

"Scientists, industry, policymakers, and regulators need to make optimal choices about issues confronting U.S. agriculture in order to maximize the benefits and reduce the

detrimental effects of food production activities. Improvements are needed in agricultural air pollutant emission inventories, measurement and monitoring methodologies, modeling, and best management/production practices to mitigate air pollutant emissions from agricultural sources" ("Emerging National Research Needs for Agricultural Air Quality").

This passage was also used in my response to question 6; by Dr. Peter S. Thorne at the University of Iowa. Dr. Thorne specializes in the areas of Occupational and Environmental Health:

"Air quality data for CAFOs are quite limited. There are relatively few monitoring programs for large-scale livestock production compared to other industries that are regulated. This is further complicated by the fact that the air emissions from CAFOs include a wide array of toxicants including gases, vapors, odoriferous compounds, particulates, and bioaerosols. There are no federally mandated monitoring programs in the United States and only a small number of states have instituted their own monitoring. Efforts to institute local controls have generally focused on sitting, set backs and zoning rather than compliance with standards of hazardous air pollutants. In Europe, the situation is different. For instance, the Netherlands has established programs based on manure handling practices and for control of emissions from CAFOs. Initially these covered only intensive livestock producers, but now these regulations will extend to all farms. The European Union has issued a number of directives designed to limit emission of ammonia, methane and odors.

"The majority of the monitoring and exposure data available has come from academic researchers interested in characterizing the emissions either for studies of occupational and community health or for studies to address emission rates and efficacy of control approaches. Recently, citizens and citizen groups have begun setting up their own hydrogen sulfide monitoring as a means to provide exposure data to the debate over CAFOs. The swine industry has not engaged in monitoring of air emissions in the United States except when required by court settlements or regulatory action…

"While there are real time monitors available for some (e.g. Jerome meters for hydrogen sulfide) most compounds are determined using GC-MS or HPLC-MS methods on air samples collected in impermeable bags or by extraction or purging from collection media. Some vapors, such as ammonia, exist at significant concentrations in both the vapor phase as well as adsorbed to particulate matter. For quantification of these compounds, it is necessary to assay for both the solid and vapor phase. This can be accomplished with annular or honeycomb denuders that collect the vapor phase by reaction with citric acid and the particulate phase by analysis of material deposited on air sampling filters. Of the multitude of compounds in this mixture, those most commonly measured are ammonia, hydrogen sulfide and methane.

"Methods are well established for characterization of the odor threshold of an air sample… Odor thresholds are quantified using an olfactometer and a panel of smellers. These panelists are non-smoking adults that ate carefully selected and trained according to ASTM Special Technical Publication 758 Guidelines for Selection and Training of

Sensory Panel Members. Eight panelists sniff a two-fold serially-diluted odor sample as it is discharged from one of three ports. The other two ports deliver clean air. The panelist must select which of the randomly assigned ports is the sample and declares whether the selection is based upon recognition, detection, or a guess. The panel them samples the odor at a two-fold higher concentration. Analysis of results from the panel utilizes the triangular forced-choice method in an ascending concentration series…

"While methods are established for monitoring concentrations of all these compounds, little monitoring has been done in the vicinity of CAFOs. However, occupational health studies have characterized exposures within animal houses. Quantifying odors has relied on [human] olfactory… In addition to direct effects on humans, greenhouse gas emissions and volatization and environmental deposition of ammonia are air quality concerns from CAFOs" ("Chapter 3.0 Air Quality Issues.")

The following piece is from the Texas Environmental Almanac, in association with scholarly articles and universities in Texas:

"Large CAFOs are typically required to obtain air permits, while smaller CAFOs are usually exempt from the permitting process. Regardless of size, all CAFOs must be operated in a manner that does not result in either dust or nuisance odor problems. While quantitative measurement standards for odors have not been developed, odors from CAFOs in rural areas are a controversial issue. Numerous odor and dust complaints have been filed with the field offices of the Texas Natural Resource Conservation Commission over the years. If the TNRCC confirms an odor or dust problem either in response to a citizen complaint or as a result of investigation it can issue a notice of violation. If the problem is not corrected after the notice of violation, the state can begin formal enforcement action, which may include administrative fines.

"However, the perception and reaction to an odor can be highly subjective, and different field offices have interpreted the authority to issue notices of violation differently. Because of recent court cases concerning the regulation of CAFOs and because of the complexities often surrounding alleged nuisance conditions associated with these types of operations, new policies are being developed to assure consistency in the TNRCC's regulatory process" ("Texas Environmental Almanac, Chapter 6, Air Quality, Page 8").

Iowa State University and the University of Iowa presented the following report to "help the Iowa Department of Natural Resources (DNR) develop guidelines for measuring and regulating air emissions" from CAFOs:

"Because the lack of consensus is reinforced by differing opinions on how to regulate odors, the report [by 27 professors of Iowa State and the University of Iowa in February 2002] includes two separate odor regulation approaches.

"The first approach recommends that odor be measured at a residence or public use area. Odor level should not exceed 7:1 dilutions in two measurements separated by

four hours on any given day. The dilutions should not exceed 15:1 at the property line. This option also allows CAFOs 14 days during a calendar year (with 48-hour notice) to exceed those odor limits at the property line. If CAFOs exceed those limits, then regulatory action should be taken, according to the study's executive summary.

"The second approach states, 'Odor recommendations are more difficult to establish because studies relating health impacts to odor exposure have not measured odor concentrations.' This option recommends sampling odors at the source and the residence or public-use area to measure the frequency, duration and concentration of exposure to odor. These scientists recommended using the available modeling tools, instead of excessive monitoring.

"Some study group members say funding is needed for additional random studies on air emissions from animal operations. Donham disagrees: 'We felt we had the evidence to make these recommendations without waiting at least two years for additional research and without being a burden to the industry.'

"However, Iowa DNR [Dept. of Natural Resources] Director Jeffrey Vonk has put forth a plan that would monitor emissions for a period of time prior to setting regulatory numbers. This suggests that the government agencies agreed that additional studies were necessary.

"The study group was led by Richard Ross, distinguished professor in the Department of Veterinary Medicine and former dean of the College of Agriculture at ISU, and James Merchant, dean and professor of the College of Public Health at the University of Iowa.

"The recommendations were considered as the Iowa Legislature developed new livestock regulations during its 2002 session (see related story, page 46). The legislation, which requires the Iowa governor's signature before becoming law, allows the DNR to make rules limiting air emissions from permitted facilities. The law would impose user fees on producers to fund additional DNR staff and equipment to monitor facilities" ("Iowa Universities' Air Quality Report Causes a Stir," 2002).

(See continuation)

When I am elected our next state representative, I want to hold all CAFOs that are already here accountable to their agreements, and hold all new proposals to the highest standard, united with the ultimate decision of acceptance resting on the local community. I support our family farmers, and always will as your state representative. The inevitable fact is that we do need to work with the current CAFOs, and I feel that Ohio as an agricultural state is making progress. We must recognize differences, such as CAFOs not being held to the same standards of the Clean Air Act, and what the implications are for this. We must investigate and research further. Now is the time to work with other states that have CAFO experience, and gain from their trials and tribulations. Further, we should look to the rest of the world for answers, such as the current agricultural policies of the European Union. We must understand that CAFOs affect everyone because they largely provide the world's nourishment. So everyone, worldwide, has a stake in how we regulate and accept CAFOs… and we have a duty to respond in the name of human health.

Please contact me with any further questions at benforohio@yahoo.com. Thank you.