

Food Working Group Speaker Series Session #5

April 23rd, 2014 @3:00pm

Speaker: Michelle Nowlin, Supervising Attorney: Duke Environmental Law and Policy Clinic

Topic: Regulating the Environmental Impacts of Meat Production

A lot of people have the conception that we are talking about “meat” and not animals.

Further, CAFOs are posing serious health concerns. Use of anti-biotics necessary to animals living in these concentrated scenarios.

Socioeconomic concerns – many of these are externalized. There is no such thing as “cheap food”. But who is paying that cost? We need to be more transparent about those costs that are then imposed on society.

Subsidies allow corn/other feed to be purchased below the cost of production.

Companies integrated from “the corn to the bacon”. Will own everything from all the processing, to the food labels you see....now even going to involvement with the fuel.

Shrinking number of farms with livestock, but greatly expanding number of animals per farm. Can stock more now in Concentrated Animal Feeding Operations.

Environmental Impacts: loss of biodiversity for different animal populations. “Smithfield Lean Generation” is the type in largest production. Durex also used in large production. But there are many hog breeds that are now critically endangered and only exist in captive breeding programs.

Impacts to water quality/soil (buildup of salts), ground water depletion. Many issues with disposal of manure itself.

Impacts imposed on communities and the environment at all levels of production.

Will discuss the regulations that attempt to deal with these impacts.

Regulation of food production – Local land use controls:

- Zoning - In NC, we have a Voluntary Agricultural District. Indicates that others may not want to locate a sub-division or other non-compatible structures/uses.
- Required vegetative buffers to trap particulate matter behind vents on CAFOs (hogs).
- Buffers on the edge of water courses (vegetative). Vegetation will absorb sediment and nutrients before they can get into the water.
- Groundwater withdrawal limits in some areas. But under state law in NC, many can withdraw whatever they want (no limits)
- Farms have a right to operate, will notify others that they are protected and others need to choose not to locate next to them (if they were there first).

Combination of local and state laws are ineffective to protect communities and environmental resources – turning to federal statute instead.

Clean Water Act

-joint partnership of federal government and the states

15:42 - goals of Clean Water Act are quite lofty. Benchmark standard for all surface waters – should be clean enough to permit fish populations and “primary recreational contact” (e.g. swimming)

-sets water quality standards beyond which the primary uses above would not be protected. Then, technology forcing standards that apply to different entities (pulp and paper mill, water treatment facility, cooling facilities at nuclear plants and energy plants, textile dyeing plants). Each industrial category has effluent restrictions.

-Notable: very successful in cleaning up the nation’s water from industrial and sewage pollution. Identifies point source with an identifiable conveyance. Then get limits and technology controls enforced.

-Not successful with non-point sources.

19:50 – municipal, agricultural, backyard sources (urban street runoff, stormwater runoff)

Point sources have different kinds of defined conveyances (even an airplane spraying pesticides)

CAFOs are a point source. Should be NPDES permit regulated (point source category permitted). Looks like a nonpoint source though...what is the conveyance? Many legislators very concerned with the pollutant load from these – thus was included in the Clean Water Act. But no regulations were developed by the EPA for about 5-6 years. Once they did, said most of it was precipitation-related.

1992- NRDC sued EPA to enforce the Clean Water Act on CAFOs more stringently.

Mature slaughter weight hog (220 pounds) produced 10 times the waste of a normal human. Typical facility could house around the equivalent of about 50,000 humans in a small city. But no waste treatment activities at all! Just sits in a lagoon.

24:25 – what EPA did as a result of the lawsuit and other pressure was to develop a two-tier regulatory approach. Categorized CAFOs into two categories: AFO and CAFO (number of animal units – steady state live weight – will dictate if you are a CAFO). Only permitting regulations are that you don’t discharge (except in the event of a 100 year storm) and you must comply with a comprehensive nutrient management plan. No much that enforcement for non-compliance.

28:30 – Not much knowledge of what the nutrient loading from the facilities is. While citizens groups are collecting info, hard to start and win a law suit based on this. European countries have outlawed several kinds/sizes of CAFOs.

30:00 – Regulatory structure has been mired in litigation for years. Current case in the 4th circuit right now. Swine and poultry in this region are very powerful at the moment.

Clean Air Act

31:10 – very successful at regulating large point sources.

32:00 – authorizes the emission of certain kinds of pollutants. Epa first looked at its goals of zero tolerance and decided they would have to shut down all economic activity – can’t do that! Has instead identified easily measureable, more dangerous toxins that they can set limits for.

National Ambient Air Quality Standards (based on criteria pollutants such as NO₂, lead, and several others). The Act is enforced through the state level – inventory major sources in the state and decide what the appropriate levels of limits should be (State Implementation Plan). Designed to protect human health with an ample margin for human safety. Thus, an element of risk assessment is incorporated.

36:30 – EPA confused about finding an effluent path/point of conveyance. Strange as hog houses have discrete fans at the back of houses. Europe has a screen that will collect the dust that comes out of these. Not so in the US, perhaps because it is more expensive.

Q: How effective are the vegetative buffers at the back of the fans?

A: Pretty good at collected dust and breaking up odor fumes. Can help out neighbors a lot. Free service from NRCS.

38:40 – EPA challenged at how to regulate these facilities. In 2006, EPA and companies got together and came to an agreement. Companies would pay fines to EPAs in order to get immunity from prosecution for a certain amount of time. Civil penalties used to do EPA research to study the polluting effects of CAFOs. Through the study would take two years. Ultimately took 5 years, 2011 published results, and now have been publishing their plans for regulations.

Monitoring Site Locations were throughout the country, but when it was published, many scientists complained that they didn't have enough. Haven't put emissions restrictions in place yet while they gather more data. Companies maintain immunity in the meantime.

42:30 – Some poultry operations have started keeping litter in a covered high tunnel.

Emissions estimates are as high as 10% of total emissions of all US emissions. Contains particularly bad methane and nitrous oxide GHGs.

45:00 – Resource Conservation and Recovery Act (RCRA) may be able to be applied. But not very successful yet. Safe Drinking Water Act also really only applies to Municipal Treatment plants (serving 25 households or more)

So: not much environmental regulation of meat production!

Research is on the way for treating waste.

47:50 – Some are very simple (a bard scraper – separate solids from liquids to make each easier to handle. Create a dry and wet product).

49:30 – “Super Soils” – pilot project integrating hog waste, peanut waste, and food waste and creating compost.

Energy creation.

51:00 - Hoop house/deep bedding – in

[DISCUSSION]

Charlie Thompson (Doc Studies): Can you tie in your regulatory commentary with the environmental justice movement?

Nowlin: Land Loss Prevention at NCSU proved a lawsuit against USDA regarding discriminatory lending and other practices, many other movements. But at the EPA and State level, for a regulatory approach, the environmental agenda is best positioned for a regulatory approach to be applied.

(7:25) Charles Adair (Duke Carbon Offset Initiative) Q: what would the pricing structure look like for alternative operations? Is there a global market for it?

Nowlin: won't be too substantial of a jump. One study said maybe 3-5cents per pound of meat – not sure how robust the study was. But this is very different from what you actually see at the farmer's market.

10:00 – has heard of elastic demand for meat (as one meat goes up, another one becomes in demand – increase beef, go to poultry). No one wants to increase their cost of production relative to another meat. Need to hit everyone with a regulation at once.

Katie Anderson (Nicholas graduate student): what about product differentiation through meat? Like with seafood?

Nowlin: There is animal welfare certified. But there is a lot of label fatigue now. They are not defined through the FDA, not well-substantiated. Need to understand how the process works in order to make it meaningful to the consumer. Only 2% of consumers at large will really know and chose based off of this.

Most people just buy based on cost. Need to start revolutionizing the big companies who sell this themselves. Efforts around anti-biotics have been very successful (Bovine Growth Hormone free). Last week Chick Filet announced it would stop using chicken that had been raised with anti-biotics. USDA and FDA have shown some response around perhaps prohibiting use of some anti-biotics. Currently a voluntary program.

Q: But what are they doing to address the core issue?

Nowlin: could change the food mix (add more forage/grass), change stocking rates, ...then may need less antibiotics

Emily McGInty (Duke Campus Farm): Who is talking about this internationally?

Nowlin: Society of International Chemists working on this. Measuring emissions and examining ways to reduce them. Hasn't come up much to the FAO. WHO is concerned about antibiotic resistance.

Amber (Duke Diet and Fitness): So much of this is politics – why doesn't it get talked more about human health? What are they doing in Europe differently that things have been changed?

Nowlin: Banned gestation crates, battery cages for broilers/layers....

Amber: How did they win the politics?

Christine (Duke Diet and Fitness): Do they not have the big companies?

Nowlin: People over there are perhaps more tied to the food culture. And it's more population dense. It's hard to hide. Messengers need to be different. Environmental groups not trusted as they once were. Going to take ordinary citizens and physicians. Citizens for Society Responsibility. Translate this more broadly.

Eileen (Superfund Research Center): Do you know of any progress for small producers to get off the ground (and get around all the regulatory hurdles that make it too difficult for them financially)?

Nowlin: Effort in the West to mobilize “mobile slaughterhouses” that would travel around to farms.

Joel Salatin: “Everything I want to do is illegal” book.