People, Pigs and Politics: 
The Case of Swine in North Carolina

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Figure 3
Racial and ethnic composition of census blocks and the locations of NC IHOs operating under the General Permit, 2014
Water Quality; Air Quality
Nuisance Claims

Dead Boxes
Odor
Proximity to Sprayfields
Exposure to Pathogens
Property Values
Hurricanes
Response?
North Carolina Politics

- 1995: Ocean View Farms => Blue Ribbon Commission
- 1997: Moratorium; General Permit
- 1999: Hurricane Floyd
- 2000: Floodplain Buyout
- 2000-2005: Smithfield Agreement
- 2007: Ban New Lagoons
- 2015: Title VI of the Civil Rights Act
- 2016: Nuisance Lawsuits Filed
- 2017: H. 467
- 2018:
  - Title VI Settlement
  - Nuisance Lawsuits: juries award ~ $500,000 million in damages
  - H. 711
  - Hurricane Florence
  - Smithfield Biogas Announcement
• Global Demand for Meat is Increasing

• Livestock production accounts for ~10% of anthropogenic sources of GHGs
  • Methane and Nitrous Oxide
  • Higher when account for all supply-chain emissions

• Environmental Justice
Waste-to-Energy: A “Solution” to CAFO’s Environmental Problems?
Types of Waste-to-Energy Projects

- **Generate Electricity**
  - **On-Farm Electricity Production**
    - Generate electricity at individual farms
  - **Centralized Electricity Production**
    - Aggregate biogas to a hub for centralized electricity generation

- **Connect to Pipeline**
  - **Individual Farm Directed Biogas**
    - Individually connect each farm to existing natural gas pipeline
  - **Centralized Directed Biogas**
    - Aggregate biogas to a hub for injection into the existing natural gas pipeline
Loyd Ray Farm
Waste-to-Energy Benefits

- Mitigate livestock sector GHG emissions
- Reduced odor
- Reduced nutrient content of waste
- Reduced likelihood of pathogen transmission
- Reduced likelihood of waste spill during rain or flood
- Additional Farm Revenue
Nevertheless, A Flawed “Solution”

- WTE does not make an inherently unsustainable model of livestock production sustainable
- Does not reduce waste volume or eliminate need to land-apply waste
- Does not address public health crisis about the misuse of antibiotics/antibiotic resistance
- Requires large volumes of waste to be profitable; further entrenches CAFO model of hog production
- Centralized Digestion Facilities pose community concerns: transport, emissions

2018 EHSP Fall Forum
Solutions: Alternative Production Methods; Intense Rotational Grazing Reduce Emissions and Increase Carbon Storage
The Importance of Inclusion

• Exclusion manifests broadly in:
  • Environmental injustice
  • Unequal access to quality schools
  • Lack of access to political/civic institutions
  • Lack of access to medical care
  • Denial of infrastructure (water, sewer, transportation)
  • Absence of quality affordable housing
Legislative Session 2019-2020

Potentially relevant avenues for research:

- Post Florence – Mitigation and Climate Adaptation
- Emerging Contaminants
- Green Chemistry
- Toxics

*Special Session – Nov. 2018
Long session begins – Jan. 2019
Swine General Permit Renewal

- Stakeholder engagement begins November 27, 2018
- General Permit expires September 30, 2019
NC Odor Rules:
Swine Operation Exemption

• According to a law passed in 2017, renewable energy producing facilities are exempted from odor rules,
• The NC Department of Environmental Quality must add this exemption to existing odor rules.
• Public Comments are due to the Environmental Management Commission by February 2019.
QUESTIONS?