

# HOG PRODUCTION:

Lauren Gilbert



LAYING WASTE TO NORTH CAROLINA AND ITS PEOPLE

## A BREIF BACKGROUND

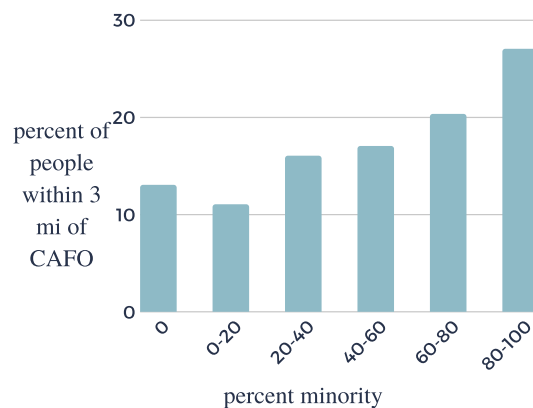
In the 1900s North Carolina leaders implemented numerous protections and tax breaks for the swine industry hoping to foster economic growth (Bullers). What emerged were **confined animal feeding operations (CAFOs) which contain thousands of animals in one large building accompanied with open-air cesspools for their waste to decompose. These lagoons of waste release hundreds of toxic chemicals and particles into the air while decomposing, and then the waste is sprayed onto fields as fertilizer, further spreading toxins (Mirabelli).**

## THE 3 MAJOR RAMIFICATIONS:



### DEVASTATING THE ENVIRONMENT

CAFOs threaten the environment in many ways, chiefly by **polluting air and water**. Methane gas produced by hog waste is **a greenhouse gas 25 times more potent than carbon dioxide** (Morrison), and the common practice of spraying waste as fertilizer leads to airborne manure particles (Wendee). Feces seeps into water supplies, **killing fish**, and flooding leads to **dangerous levels of E. Coli and salmonella**. CAFOs are most concentrated in rural places where more than 85% percent of households depend on well water for drink, meaning their **main source of drinking water is at risk** (Wing injustice).



(Wing)

### DISPARAGING EQUALITY

Hog CAFOs **disproportionally impact racial minorities and the poor**. The amount of feces along with urine produced by hogs within 3 miles of residence **increases by 100,000 and 243,000 pounds for every 10% increase** in Black and American Indian populations respectively. Census blocks with 80% or more people of color are 3.30 times more likely to be within 3 miles of an industrial hog operation, and the poorest quintile of blocks are **20 times more likely to have CAFOs nearby** than the richest quintile (Wing, Johnston).

### DESTROYING QUALITY OF LIFE

Communities near hog CAFOs, specifically in the south eastern, have the **highest mortality rates in the state** which can't be explained by controlling for socioeconomic factors (Kravchenko). Residents living near hog operations have **significantly high levels of physical disorders and psychological distress** as a result of their proximity to the farms. (Bullers). Residents near CAFOs report a **decreased quality of life**, being unable to open windows or go outside due to odors, or their children being **bullied** for having manure-scented clothing (Wing). In such communities, hog waste leaves a **fine mist of manure sprinkles in the air**, coving laundry and cars (Wendee).

**Those near hog CAFOs have the lowest life expectancies in the state. Their properties are covered manure mist.**

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## RECOMENDATION REQUIRE LAGOON COVERS FOR OPERATIONS WITH MORE THAN 1,000 SWINE



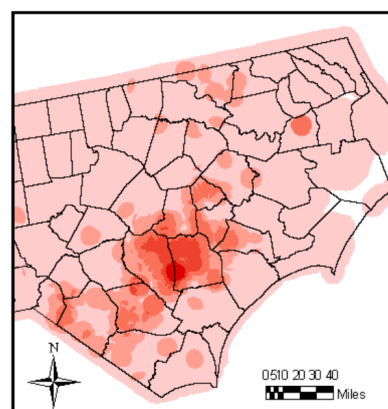
### WHAT ARE LAGOON COVERS?

Coverings for waste lagoons, trap methane gas, prevent odors, stop rainwater from entering waste lagoons further filling them, and make biogas production more effective (Morrison, Zhang, Prasodjo).

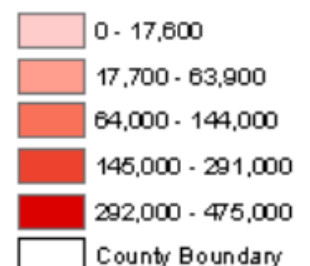
While lagoon covers can be expensive upfront, ultimately by increasing production of biogas they can pay for themselves in 5 years (Morrison). They address environmental concerns by preventing flooding of waste lagoons and trapping methane gas. By reducing odors and removing airborne manure particles they significantly improve quality of life. Covering these operations would also work to alleviate racial injustice as large hog production clusters around areas with high percentages of minorities. This phenomenon is not necessarily because CAFOs are intentionally targeted poor communities often don't have the money, time, and knowledge to combat operations. Also, minorities tend to have fewer means to advocate for themselves and don't believe they have political efficacy (Wendee).

### WHY WILL LAGOON COVERS PROMOTING BIOGAS HELP?

Biogas refers to methane produced by decomposing organic materials. For hog production, creating biogas involves collecting methane gas produced then using a turbines to create natural gas (Morrison). Biogas removes methane and can turn major economic profits (Prasodjo).



Biogas Potential  
(MMtu/year)



North Carolina has the potential to produce large quantities of biogas.