RESEARCH SUMMARY

Addressing community concerns about environmental conditions

ISSUE 1

RACE, POVERTY, AND HOG FACILITIES IN NORTH CAROLINA

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WHAT'S GOING ON?

Industrial hog facilities house large numbers of livestock. Hog facilities flush waste into open-air pits and spray decaying waste on land. This can pollute local soil, air, and water. Pollution from these facilities affects the health of livestock farm workers and hog facility neighbors.

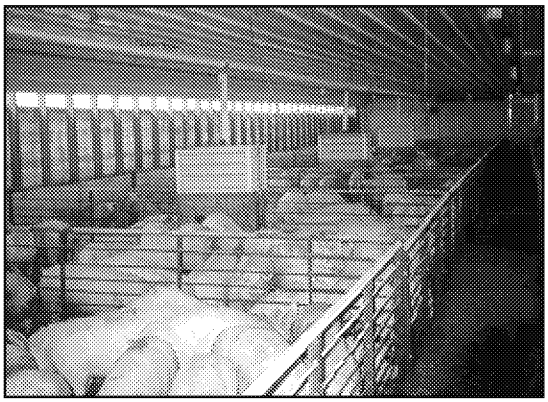
Research shows that neighbors of industrial hog facilities report more asthma symptoms, headaches, runny noses, sore throats, coughing, diarrhea, and burning eyes than people who do not live near hog facilities.

MAJOR FINDINGS

- **Almost 30% of middle schools in this study in rural North Carolina were located within 3 miles of a hog facility.**
- **Livestock facility odors were reported outside about one-fifth of schools, and inside about one-tenth.**
- **Low income schools are closer to industrial hog facilities than are high income schools.**

WHAT WAS DONE

Researchers used surveys and public records to describe 226 public schools in rural North Carolina. Public records provided information about student race and income levels as well as the locations of industrial hog facilities. A survey completed by school staff described livestock odor at schools.



Industrial hog pens in Wisconsin.
Source: CAA (http:\\www.ca4a.org)

WHAT WAS FOUND

The distance between schools and the closest hog facilities ranged from 0.2 to 42 miles. Thirty percent of schools included in this study were within 3 miles of at least one industrial hog facility.

Low-income schools in communities of mostly people of color had industrial hog facilities within 3 miles more often than schools in mostly white and high-income communities. As distance from the nearest hog facility increased, so did white enrollment and income level of the school.

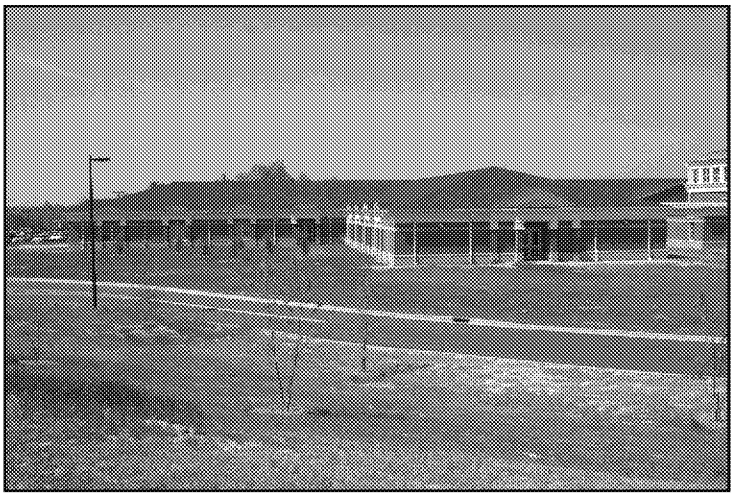
Visit our website for additional research summaries and other educational materials.

DIALOGUE FOR ACTION

Exchange Project

BECAUSE OUR ENVIRONMENT AFFECTS OUR HEALTH

WHAT IT MEANS



More than 200 schools in North Carolina were examined in this study.

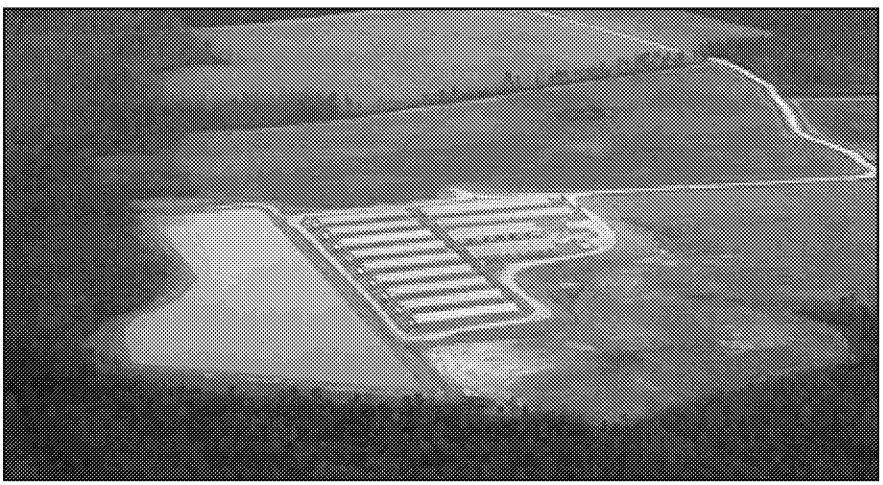
School employees reported smelling livestock odors outdoors at 47 schools (21%). They could smell these odors inside at 19 schools (8%). Employees at low-income schools noticed livestock smells more often than employees at high-income schools.

Hog facilities and livestock odors affect low-income schools more often than high-income schools. Low-income children have higher asthma levels.

Livestock odor may disrupt activities when it reaches classrooms. Students and staff members may become anxious because they cannot avoid the odor. Students with a history of breathing problems may have concerns about the effects of the odors.

Livestock odor may make some schools less appealing to new teachers and staff. Parents and volunteers could be less involved because of the odor. The odors from hog facilities could also decrease the use of school facilities for community purposes.

Livestock odor at schools shows that pollution from hog facilities reaches far beyond the property boundaries of the facility. The odor raises concerns about the health risks of hog facilities near schools.



Aerial view of a hog farm in North Carolina The lagoon on the left holds hog feces & urine.
Photo source: http://www.factoryfarm.org

REFERENCE

Mirabelli, M.C., Wing, S., Marshall, S.W., & Wilcosky, T.C. (2006). Race, poverty, and potential exposure of middle-school students to air emissions from confined swine feeding operations. *Environmental Health Perspectives, 114*(4), 591-596.

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COMMUNITY DRIVEN RESEARCH

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NC Environmental Justice Network, Concerned Citizens of Tillery, and UNC School of Public Health seek to make a long-term impact on unjust patterns of environmental contamination through a partnership in research. This study was inspired by community concerns. A Community Research Advisory committee contributed to review of the research plan, recruitment of schools, review and interpretation of results, and feedback to participating schools.

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