



# **Threat to Health and Quality of Life of Rural Residents from Industrial Meat Production**

# Economic Basis of Big Meat Since WWII

- Economists and Politicians initiate the *We will Feed the World* paradigm;
- Much more money could be made by running grains through animals and selling & exporting meat and dairy products – instead of selling the crops for direct consumption;
- In America the USDA worked with Livestock Assns. to push meat consumption.

**So, over some 40 years after WW II**

- The food system was transformed from

This . . . . .



Sustainable Ag Project

10.19.2008

To

# Cattle Feedlot





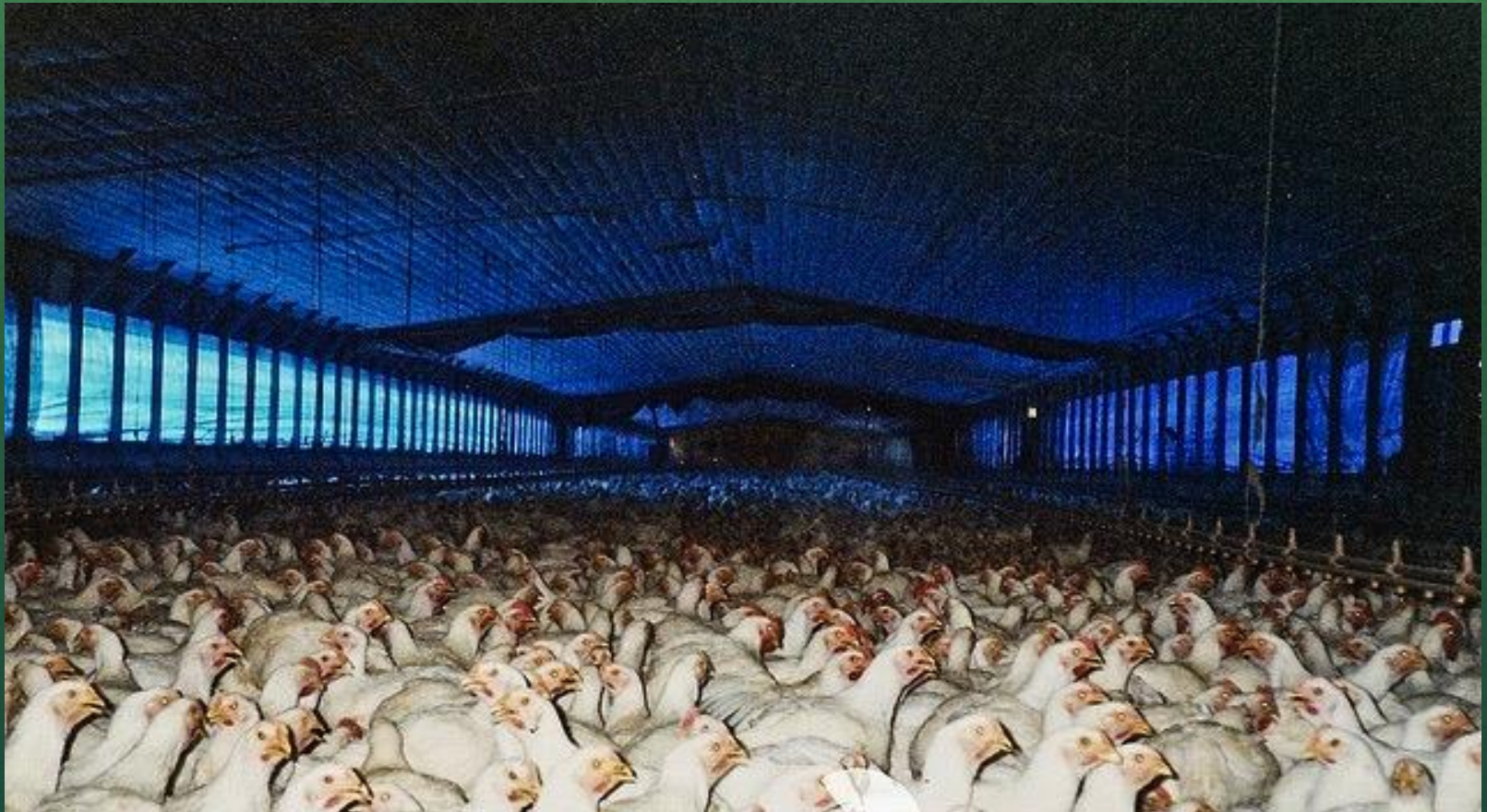
To



# Hens in Egg Factory



# Broiler Factory



# This



To

# Caged Sows



# Concentrating the Animals Concentrates the Waste

Manure Lagoon in Wichita County, Ks



# Seaboard Ladder Creek in Greeley Co. Ks. 200,000 Hogs



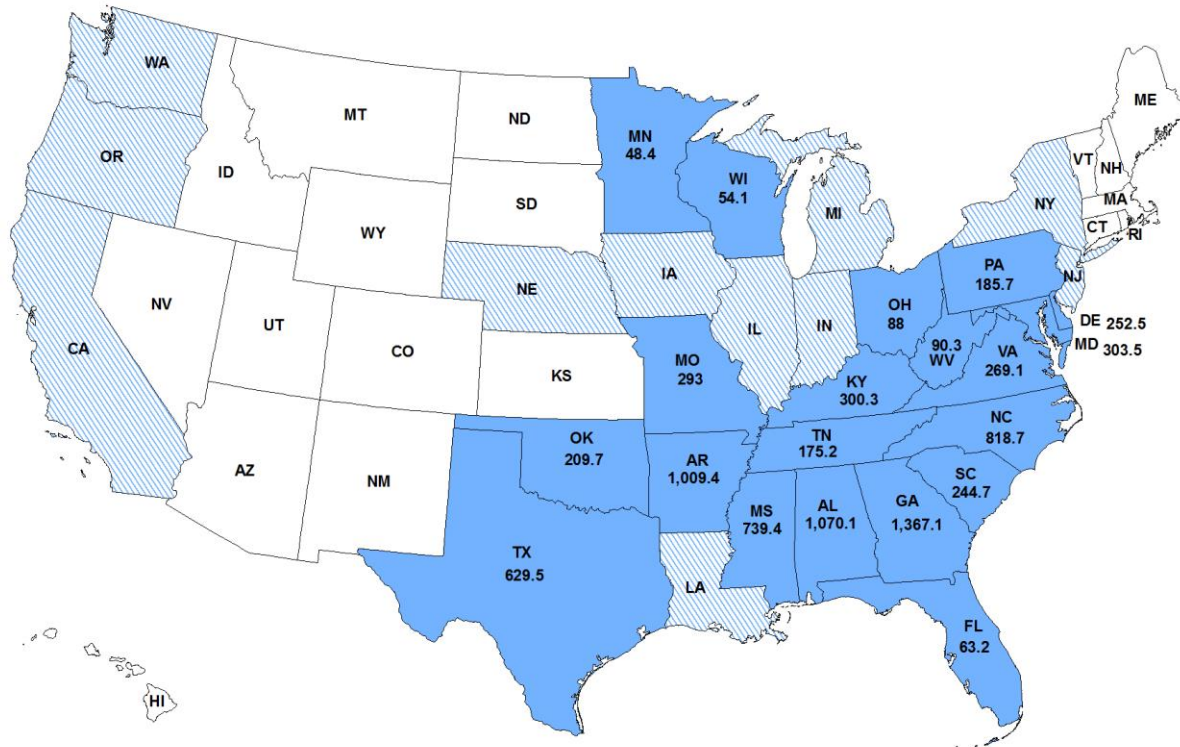
# Other CAFOs in Kansas

- From '70's, vast cattle feedlots were established mostly in southwest Kansas with the largest confining some 140,000 cows;
- In the 1990's mega-dairies came into the western part of the state with the largest now confining 41,600 cows;



# Up to now the only poultry in the state are two large egg laying operations; no “broiler” CAFOs

Broiler Production by State  
Million Head, 2016



U.S. Total: 8.78 Billion Head

8.2 Billion Head, 93.6% of the U.S. Total

Other Production States

USDA-NASS  
04/28/17

Source: S. Beyer, KSU Presentation to Ks. Senate committee

# High Density Chicken Production to Serve a Slaughterhouse

from notes of Tyson meeting with KDHE & KDA

- 65 million chickens per year
- 400 barns within 30 miles of plant;
- 29,000 chickens per barn
- 4 to 6 units each at each site
- 70 – 80 Production sites

# New Chicken CAFO Legislation (SB 405) Passed by Kansas Legislature in 2018

- Allows up to 1/3 million chickens within 1/4 mile of habitable structures (homes, businesses, churches, schools & medical facilities).
- Allows up to 1/3 million chickens within 100 feet of neighbor's property line;
- Allows up to 100,000 chickens to be sited within 100 feet of neighbor's property line, without regard to location of habitable structures;
- In order to keep birds alive, powerful fans exhaust ammonia and bacteria coated manure particles at all times.

# Over 600,000 broiler chickens at this Tyson site in Kentucky



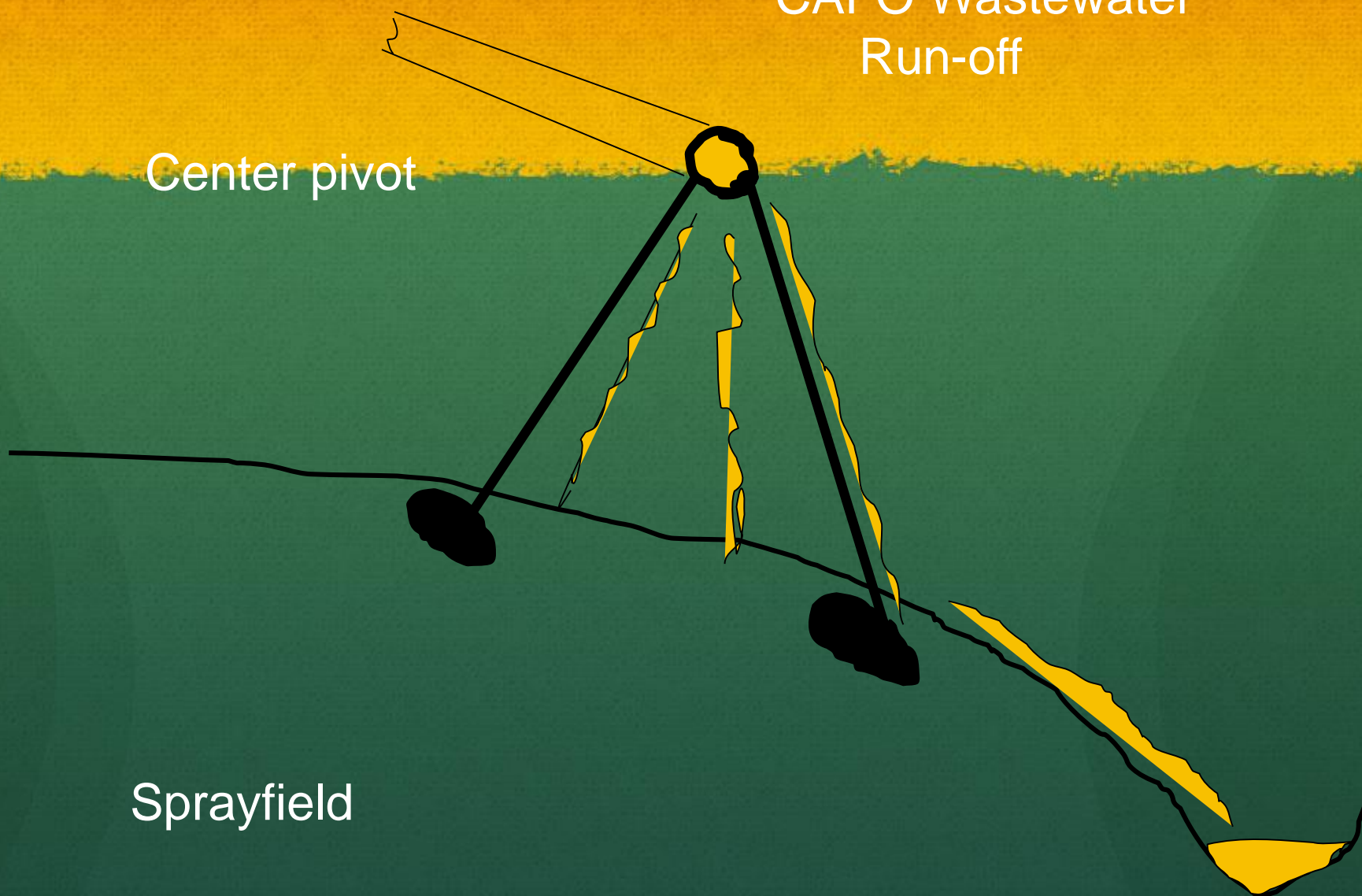
# Health & Nuisance Impacts of CAFOs

- Ground and Surface Water Pollution
- Odor and flies
- Risk of Disease Transmission
- Constant Truck Traffic

CAFO Wastewater  
Run-off

Center pivot

Sprayfield



# Got a Leak? Why, Just Punch Some More Holes!



# Anaerobic Odor Geyser from Ladder Creek #3





# Odor Regulation in Kansas

- Not directly Regulated in Kansas
- Separation Distances
  - measured from barns or lagoons
  - 4000 feet: 1000 to 3724 animal units\*
  - 5000 feet: > 3725 animal units (9312 hogs)
- \*one animal unit = 2.5 mature hogs
- Incorporate waste into soil same day within 1000 feet of habitable structure
- No consideration of very large operations or neighbors working in nearby fields (like 200,000 hogs at Ladder Creek in Greeley Co.)

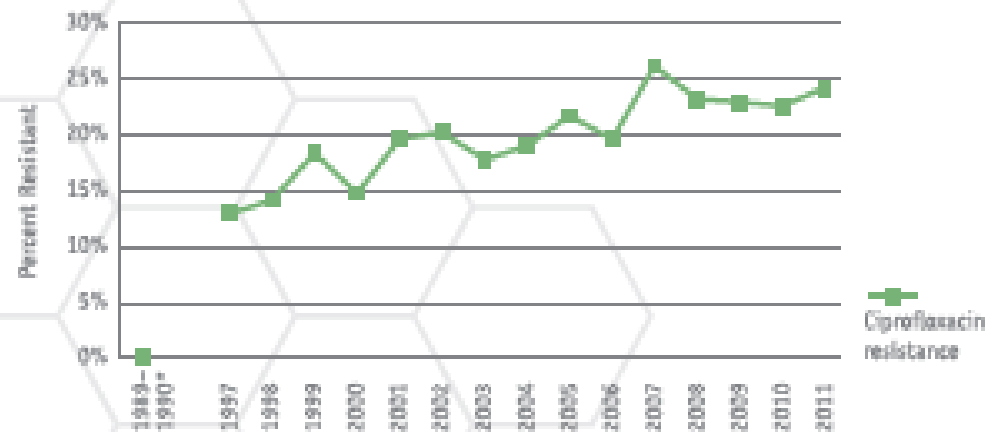
## ***Crowded Conditions*** led to :

- Use of antibiotics & development of ***antibiotic resistant bacteria (ARB)***.
- ARB is widely found on meat in stores, in communities near animal factories, and is a major threat to our health care system.
- Still rampant viral diseases in animal factories.

# Antibiotic Resistance in common pathogenic organisms related to meat production – CDC Study

*Campylobacter* drug resistance increased from 13% in 1997 to almost 25% in 2011.

Increasing Resistance to Ciprofloxacin in *Campylobacter*, 1989–2011



# Methicillin-Resistant *Staphylococcus Aureus* (MRSA)

- CDC: “During the past decade, rates of MRSA infections have increased rapidly among the general population (people who have not recently received care in a healthcare setting).” Highest Death Rate (14%).



A 2013 study in Pennsylvania found a correlation between proximity to swine waste application fields and MRSA infections

# Other studies

- A July '13 study in North Carolina found that Hog CAFO workers carried Multi-drug RSA & tetracycline-resistant bacteria at elevated levels compared to free-range hog farmers;
- *Infection Control and Hospital Epidemiology, Feb, 2014:* Residential Proximity to Large numbers of Swine in Feeding Operations is Associated with increased MRSA Colonization at Time of Hospital Admission in Rural Iowa.

# 2015 Kansas Health Institute Study

- The KHI Found that a new influx of large industrial dairies and (especially) hog factories would negatively impact air, water and soil quality and reduce property values in the vicinity of the operations and expose neighbors to antibiotic resistant bacteria;
- Recommended increasing the required separation distance to three miles and compensating negatively impacted neighbors;
- Recommended restriction of sub-therapeutic antibiotic use in animals.
  - <http://www.khi.org/policy/article/CorporateAgHIA>

Risk from  
Spray Drift

Rd H

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Google Earth

1991

Imagery Date: 9/18/2014 39°54'00.98" N 99°40'16.57" W elev 2149 ft eye alt 2537 ft



**SB 405 - Tyson Bill passed  
with little concern for  
health impacts on  
neighbors**

# Pro-SB 405 Testimony by KSU Poultry Specialist

- Citing a study conducted by researchers from University of Georgia;
- Claimed that fine particles (PM<sub>2.5</sub>) emissions blown out of broiler production barns would return to background levels only 500 feet downwind;
- Claimed there would be no health impacts upon neighbors

# Flaws in Study Design

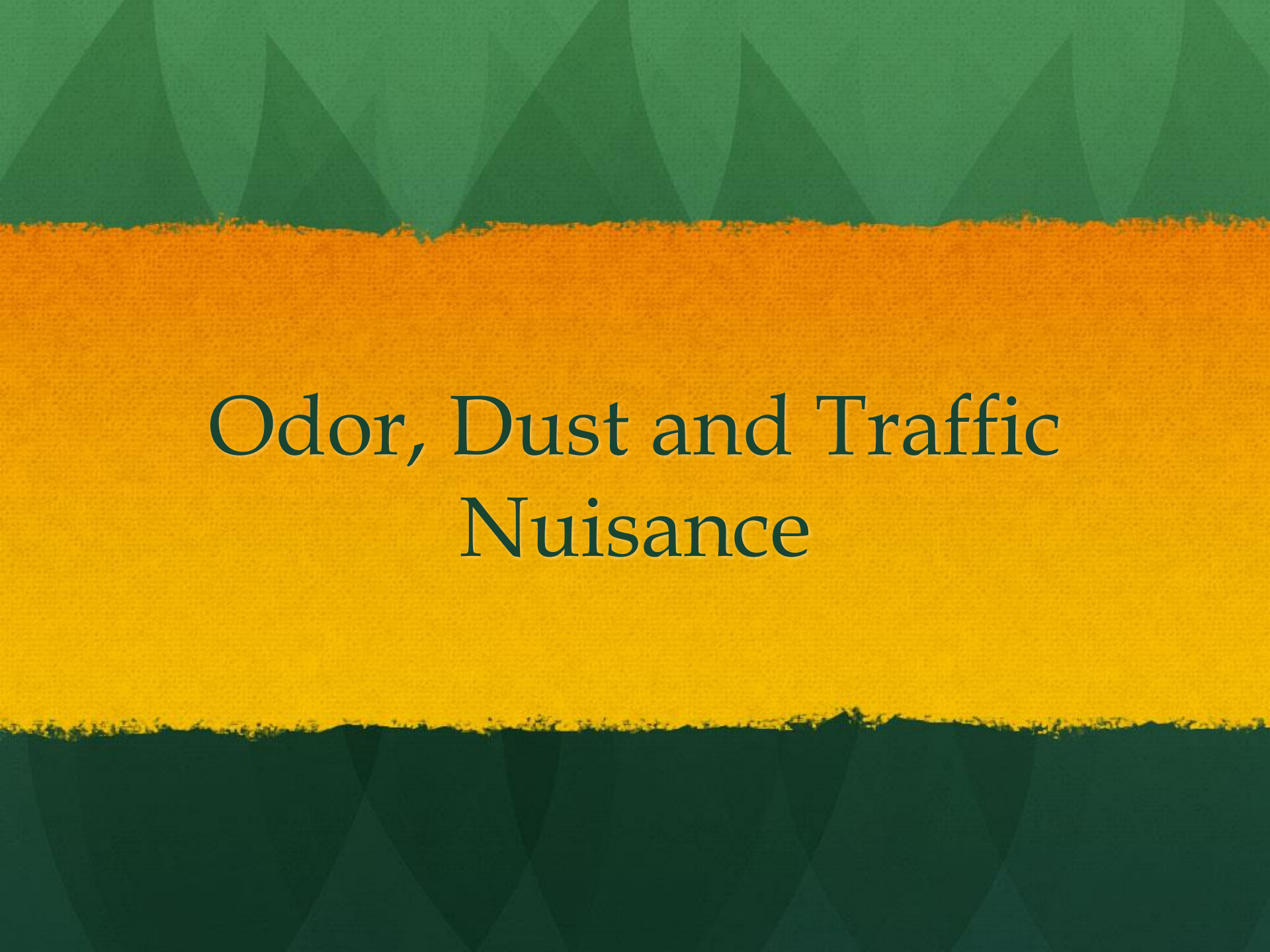
- In this case particle size does not characterize health risk;
- Health risk is related to pathogens, endotoxins and allergens associated with particles of all sizes exiting the barns; PM2.5 - fine particles are less than 5% of total suspended particulate, ie. the particles entering the barn at control monitor end are entirely different from those that are exhausted by powerful fans;
- Fine particle measurements were averaged over 24 & 48 hours. However, disease transmission from pathogens can be near instantaneous, and effects of endotoxins and allergens can occur from exposures shorter than 24 hours;

# Flaws in study design (cont.)

- 24 hour average data obscured important risks of disease transmission;
- Hourly data showed almost same levels of PM<sub>2.5</sub> at both barn exit and 500 feet downwind, corresponding to when birds would be most active stirring up dust;
- Background monitor only 100 feet from barn air intakes;
- Did not account for effect of any opposing winds on background measurements;

# Flaws in study design (cont.)

- A later study at a different broiler site performed by many of the same authors used a monitor arrangement that would not capture much of the PM2.5 emissions;
- A detailed analysis with graphics may be accessed on the Sierra Club website:
- <http://kansas.sierraclub.org/critical-review-of-senate-bill-405/>

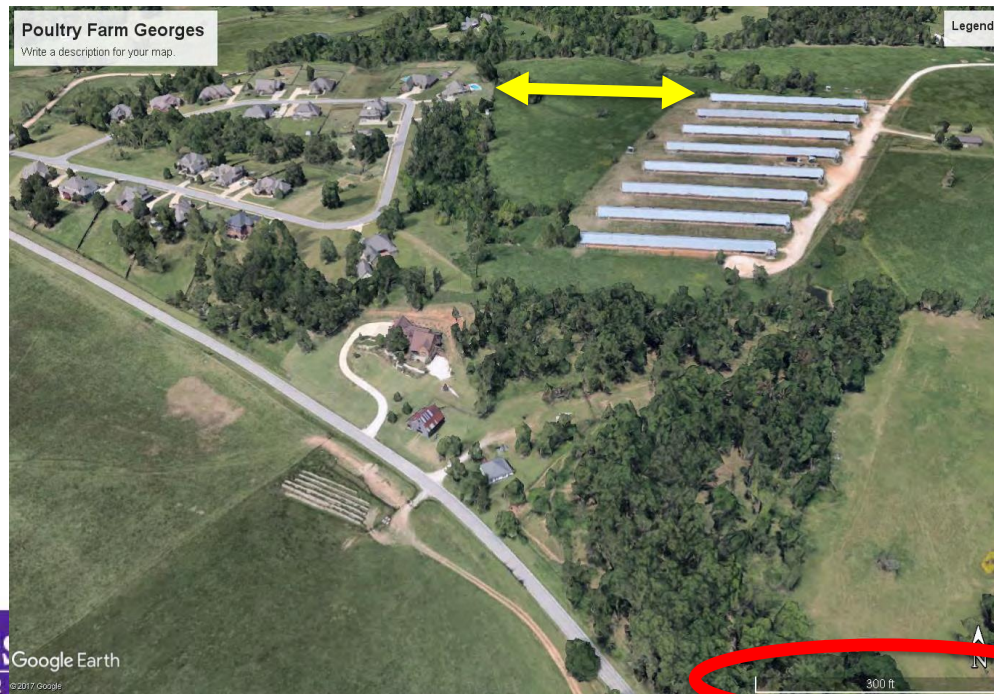


# Odor, Dust and Traffic Nuisance

KSU poultry specialist said, "Anecdotal evidence of neighbors and growers co-existing is suggested by the location of new homes, neighborhoods, schools, etc. in close proximity to each other."

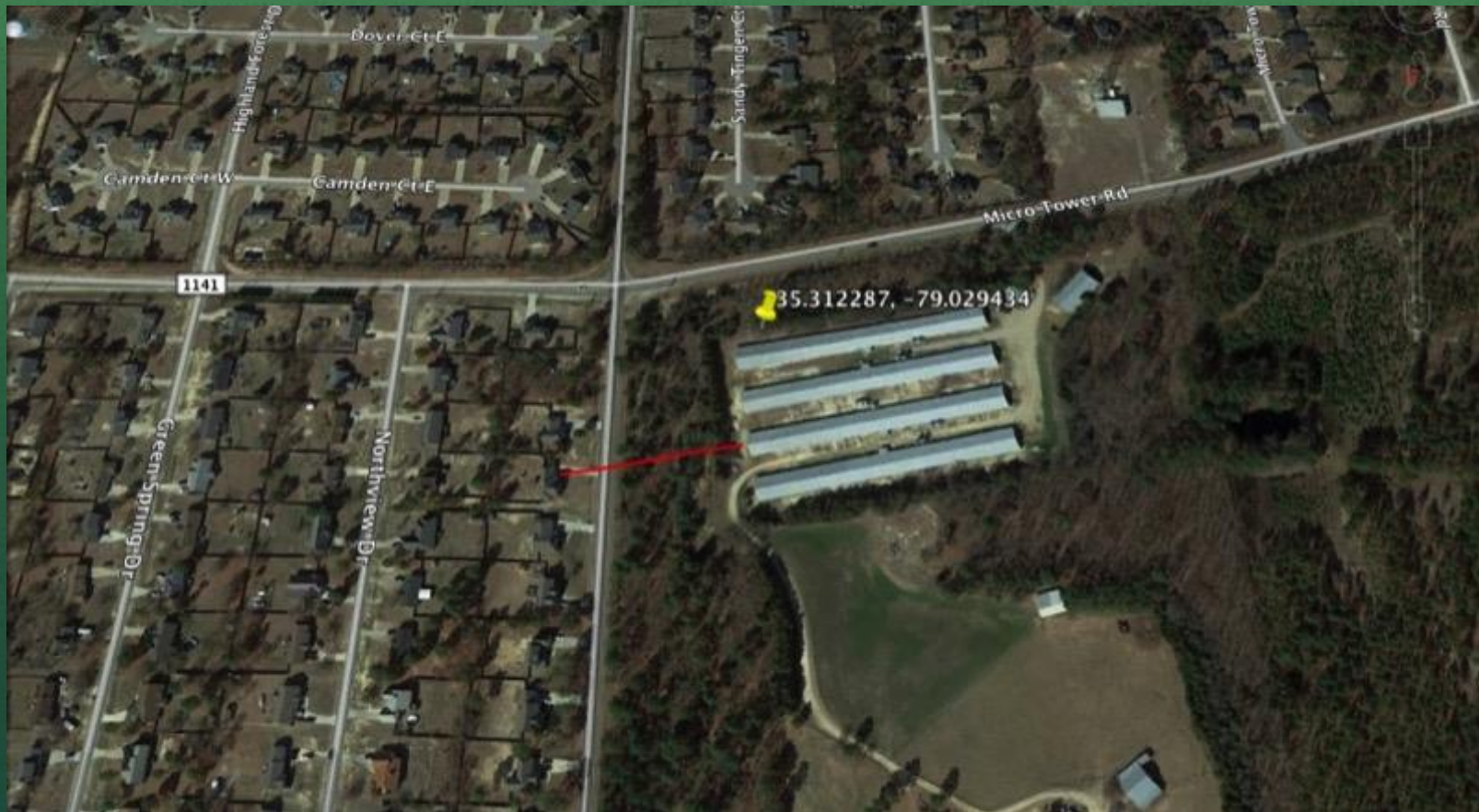
## Litter

- The most contentious issue
- There are NO LAGOONS in poultry production



**Some contradictory anecdotal evidence: Leroy, a renter, North Royalton, OH**

*I feel like I'm getting "gassed" by ammonia. Spraying a bottle of windex into a garbage bag and then sticking your head in the bag and huffing MIGHT be a close estimate to what I experience on a daily basis. At night when I turn my flood light on in the back yard, you can see it just raining chicken particles.*

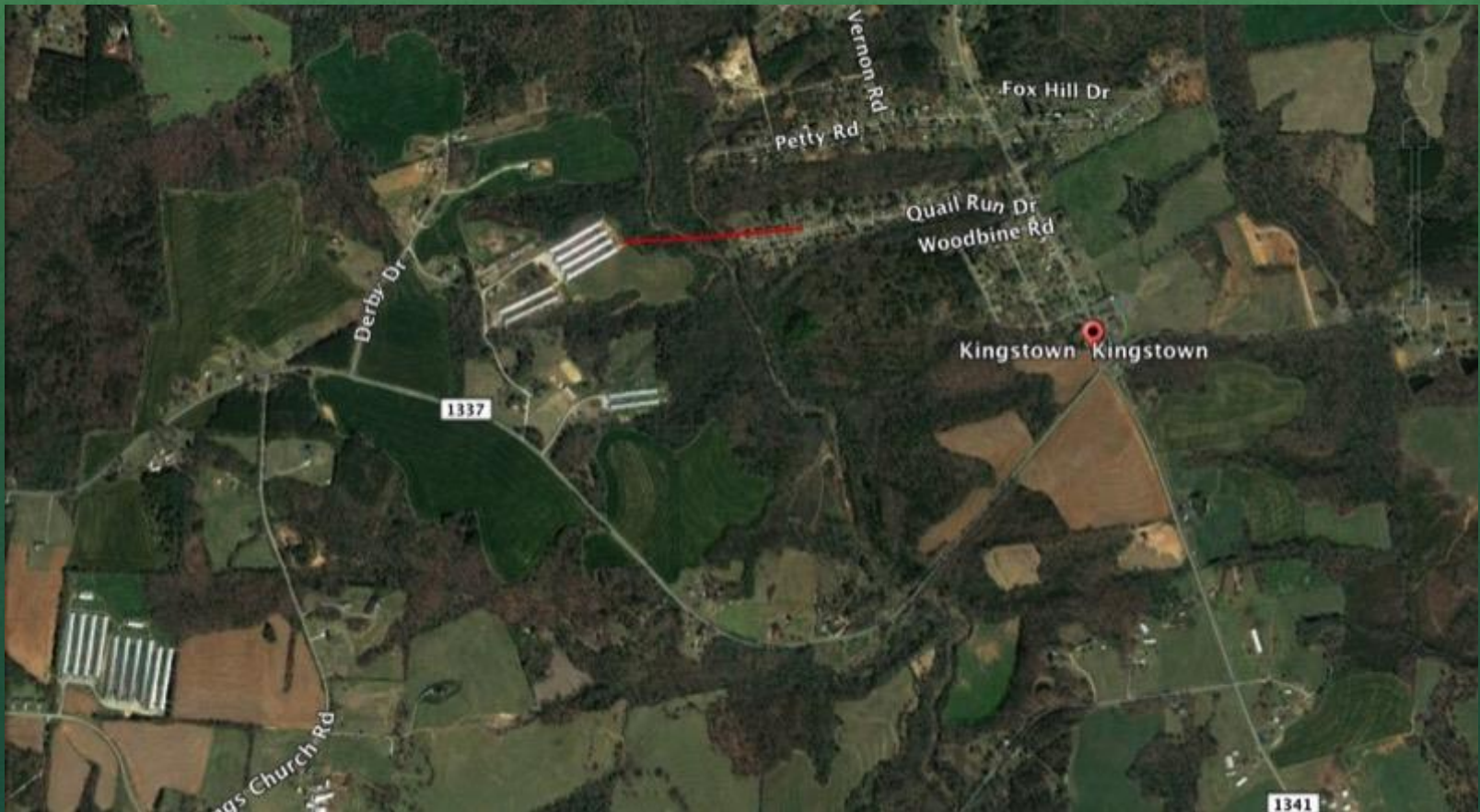


Postings from a Real Estate Website



**Michelle, a renter, Athens, GA**

*I relocated to Shelby NC and live in Kingstown right up the hill from a chicken farm, it smells horrible like shrimps left out in the sun for weeks, don't even get me started on the flies, rodents and mites . . .*



# Constant Truck Traffic



- 240 large trucks would be needed to service a set of barns holding 1/3 million chickens every 6 to 7 week production cycle;
- These trucks would ply narrow, two-lane country roads every day stirring up dust.

# Conclusion regarding massive broiler chicken influx into Kansas

- No credible evidence supports that 1/3 million chickens can be placed only 1/4 mile (1320 feet) from homes, & 100 feet from property lines without a serious health risk;
- We continue to recommend that this issue be studied by the Kansas Health Institute that conducted a similar study on Hog CAFOs in 2015.

# Other Laws Favoring Livestock Industry

- 2013 “Right to Farm” law: any agricultural activity consistent with good agricultural practices is presumed to not constitute a nuisance. Any activity that meets federal, state, and local laws is considered good agricultural practice;
- But Agricultural land in Kansas is exempt from local zoning, and
- Cities and Counties are pre-empted from regulating livestock operations;
- Counties not allowed to vote to ban large industrial poultry operations, unlike hogs and dairy;

# **New KDHE ruling evades hog setback statute.**

- KDHE allows producer to gift half his operation to his son and daughter-in-law under separate LLC's to get around larger setbacks to surface water and habitable structures set in 1998 statutes



# Husky Hogs Split Site

NAME	MATERIAL	PLACEMENT
BM-11	3-FOOT LONG 1/2-INCH DIAMETER STEEL REINFORCING BAR WITH AN ORANGE CAP STAMPED "CONTROL POINT"	DRIVEN TO APPROXIMATELY ABOVE GROUND
BM-12	3-FOOT LONG 1/2-INCH DIAMETER STEEL REINFORCING BAR WITH AN ORANGE CAP STAMPED "CONTROL POINT"	DRIVEN TO APPROXIMATELY ABOVE GROUND
BM-13	3-FOOT LONG 1/2-INCH DIAMETER STEEL REINFORCING BAR WITH AN ORANGE CAP STAMPED "CONTROL POINT"	DRIVEN TO APPROXIMATELY ABOVE GROUND
BM-14	3-FOOT LONG 1/2-INCH DIAMETER STEEL REINFORCING BAR WITH AN ORANGE CAP STAMPED "CONTROL POINT"	DRIVEN TO APPROXIMATELY ABOVE GROUND

# New Sites enabled by Husky Hogs Expansion

Harlan Co. Lake, Neb



Old Stone Pork

Long Island

Expanded Husky Hogs  
Prairie Dog Pork  
Nelson Gilt  
Hilltop Nursery

Rolling Hills Pork Stillwater Swine

Almena

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Google Earth

Imagery Date: 8/28/2017 39°56'31.09" N 99°32'42.07" W elev 2086 ft eye alt 16.24 mi





Rolling  
Hills Pork

Stillwater  
Swine

Rolling Hills Split Site

# Conclusion

- Laws and regulations governing concentrated animal feeding operations are grossly inadequate to protect the health and quality of life of rural landowners in Kansas