

Global Perspective

There are now over six and a half billion people to feed in the world. This is a shift of gargantuan proportions from one hundred years ago when there were a mere one and a half billion mouths to feed. Along with an exponential increase in population, a corresponding revolution in agriculture has occurred. Farming and animal husbandry methods of a century past are no longer viable ways to feed such an enormous population. Increasingly, in animal husbandry, CAFOs (contained animal feeding operations) have become the way to grow large amounts of fish, cattle, chickens, and hogs in very small areas.

Oklahoma has seen a tremendous growth in hog CAFO.s or mega hog farms since the early 1990's. Oklahoma is now the fourth largest producer of hogs in the nation, shipping much of this meat to overseas markets. There is a fierce controversy surrounding these hog farms which concerns their cultural, environmental, and economic impact on Western Oklahoma where the vast majority of them are located. Modern day Luddites, who decry the hog farms, attempt to outlaw them and drive the absentee multinational corporations who own the mega hog farms from Oklahoma. Their description of the owners is remarkably similar to the eighteenth and nineteenth century absentee English landlords who became rich at the expense of the Irish. On the other hand, the corporations who own the mega hog farms and processing plants believe they are doing good, not only to the world they are attempting to feed, but also to Western Oklahoma, giving it a huge boost to its economy. They resent the criticisms leveled against them. Both sides make strong cases, thus it is important to objectively examine the impact that these farms and processing plants have brought to the Oklahoma Panhandle.

An Overview of the Oklahoma Panhandle: History and Natural Resources

The Oklahoma Panhandle was called “No Man’s Land” for much of its history. It is made up of land that Texas, Colorado, Kansas, and New Mexico did not want. It was at the heart of the Great American Dustbowl in the 1930’s and actually saw a decrease in population from statehood until just recently. It is also a land that is rich in natural resources, specifically resources that have made it an ideal place to locate mega hog farms. The Ogallala Aquifer, a huge underground reservoir of water, underlies the Panhandle, thus providing an abundant supply of water for crops and animals.

The Panhandle has one of the largest natural gas fields in the world, the Hugoton Field. This gas offers a ready, cheap source of power to bring water to farm wells. The natural gas wasn’t used initially, as it was a byproduct of oil. By 1958, though, Texas County, the site of nearly all the mega hog farms, had 1,373 gas wells that produced nearly seventy billion cubic feet of natural gas per month (Lowitt 84).

An unlikely source of power in the Panhandle is wind. During the Dust Bowl, it was not a resource but an adversary, blowing clouds of dust over 10,000 feet in the air all the way to the East coast (Egan 5). The Panhandle has some of the strongest, steadiest winds in America, averaging 12-14 m.p.h. (Lowitt 9). This wind aids in the disposal of vast amounts of hog waste which are stored in open air lagoons adjacent to the mega hog farms. The aridity and the wind help evaporate the waste far more quickly than hog farms in other regions.

Finally, the Oklahoma Panhandle is located in the center of the United States thus facilitating the shipment of pork to either coast and then overseas. The Oklahoma Legislature passed a law in 1998 which relaxed restrictions on CAFOs. An abundance of natural resources

combined with the law made the Panhandle an ideal place for companies to place mega hog farms. The Panhandle's hog population went from 31,274 hogs in 1992 (Lowitt 102) to 230,000 in 1997, to over two million today (USDA).

History of the Mega Hog Farms in Western Oklahoma

In 1991, the Oklahoma State Legislature passed a law that allowed a broad exception to the anti-corporate farming statute (Kerr Center 5). Between 1992 and 1997, Seaboard Corporation, a huge, vertically integrated, international agri-business, began to investigate installing hog production and hog processing facilities in the Panhandle (Hart 397). They sought out and received an incentive package of over \$21 million dollars from state and county governments. Texas County borrowed \$8 million to give to Seaboard. In order to pay for this, the county enacted a 7% sales tax. The state government gave Seaboard \$4 million dollars and a ten year tax credit. The state also invested \$600,000 to train workers for Seaboard (Bartlett 3). For this, Seaboard gave \$125,000 to the Keyes school district and promised to donate \$2,500 for each new student whose attendance was a result of Seaboard (Bonnan 20). Seaboard began operations in 1997. Today, according to Seaboard's website, they produce approximately 3.8 million hogs per year. The processing plant in Guymon processes 4.5 million hogs a year, most of which come from Seaboard mega hog farms in the area. The plant operates double shifts seven days a week and processes 16,000 hogs per day (Seaboardcorp)

Description of CAFOs or Mega Hog Farms

Mega hog farms are in isolated places in the Panhandle. The only neighbors are other farms. Current Oklahoma law requires that hog farms be at least three miles from church camps

and recreational facilities. Lobbyists from the pork industry have sought to overturn this law several times. Currently, a bill is before the Oklahoma Senate which would weaken this injunction. According to the Oklahoma chapter of the Sierra Club, this law has stopped the intrusion of corporate hog factories in Oklahoma (Hinton).

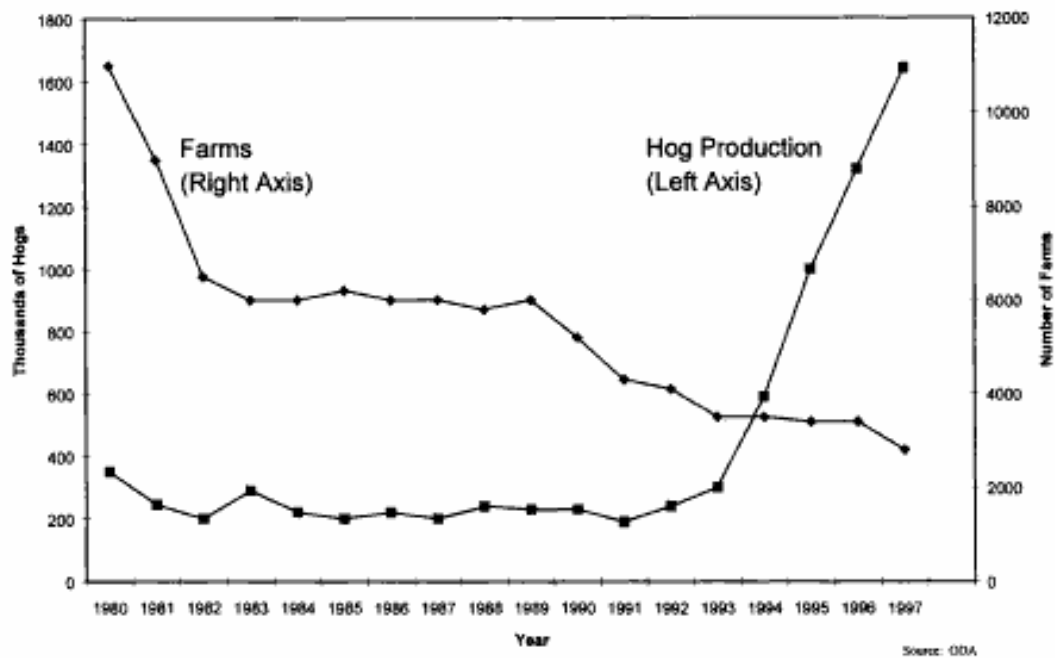
Hog farms are made up of several long, rectangular, one story buildings in rows. They are built on dry ground. The sides are open for ventilation and large metal bins are outside each building with tubes that carry feed to the hogs. Next to the building are open air lagoons where the waste from the hogs is pumped. A mega hog farm has up to 40,000 hogs in it. It takes six months for the hogs to grow from birth weight to a market weight of 275 pounds (Hard and Mayda 396). The hogs spend their lives in small pens that have almost no room for them to walk or turn around. The goal of the CAFOs is to grow as many hogs as possible, in as short a time as possible, and in as small a space as is possible. The hogs stand on grates and their waste falls below the channels which feed into the open air lagoon outside. Hogs produce two to five times as much waste as people, and the waste from 12,000 hogs is stored in open air lagoons that can exceed a capacity of 25 millions gallons (Kennedy 4). The waste is then mixed with water and sprayed as fertilizer on adjacent farm lands with irrigation equipment (Kerr Center 5).

Impact of Hog Farms: Culturally

Culturally, the mega hogs farms have radically affected life in the Oklahoma Panhandle. Most hog farms there have been, since statehood, predominantly family owned and operated. Today, the small family owned farms have nearly disappeared. The number of hogs produced

there has increased exponentially while the number of family owned farms has decreased exponentially (Hicks 266,267). (See graph)

Figure 1. Oklahoma pork production and hog farms, 1980-1997



According to the Kerr Center for Sustainable Agriculture, many farmers who are left feel their property has been devalued, and that their quality of life and environment is being ruined by the odor, water pollution, and water depletion the mega hog farms bring in (Kerr Center 6).

With the influx of corporate owned farms and processing facilities, the population demographic has drastically changed as well. In 1995, Beaver and Cimarron Counties had populations smaller than at statehood in 1907. Texas County showed only a slight increase from 16,448 in 1907 to 16,800 in 1995. Ethnically, the Panhandle was comprised 95% of native born whites (Lowitt

102,103). When Seaboard moved to the Panhandle and set up a processing plant in Guymon in 1995 the population rapidly increased. Guymon, the largest city in the Panhandle has seen its population double from 7,000 to 14,000 since 1995 (Bell/Tulsa World). Seaboard attracted and hired immigrant workers, mostly from Mexico and Central America, many of whom were illegal immigrants (Bartlett 4). Today, Guymon's Hispanic population is estimated at 40-50%. This shift has redefined Guymon, 25% of whose businesses are now Hispanic owned. It has been a difficult shift for many older Panhandle residents who distrust and fear the newcomers. According to Melyn Johnson, Guymon's director of community development, "When you're in rural Oklahoma, it's if you can accept how you grow or else. You don't grow when your town is dying. You don't have a choice. It's not good or bad. It's if you're going to survive." (Bell). Crime in the Panhandle initially increased five fold when Seaboard arrived, but has since leveled out and is now close to pre-Seaboard levels (Bartlett 5).

The Guymon schools have seen an increase from 21% of its student being Hispanic in 1996, to 42% in 2000, to 55% in 2004, to over 60% today. The reduced lunch program is a federally funded program to provide low cost or free lunches to families living at the poverty level. Guymon schools has seen an increase in those eligible for this program from 56% in 2000, when records were first published, to 66% in 2006. The high school's drop-out rate increased from 12% in 2000 to 21% in 2006. The rate of juvenile offenders also increased from 28 in 2000 to 44 in 2006 (studentreportcards).

Housing for the influx of workers has been a problem. Seaboard and local business leaders bought an apartment complex and trailer parks to house workers. The rent was automatically deducted from worker's wages as were any meals they ate at the processing plant.

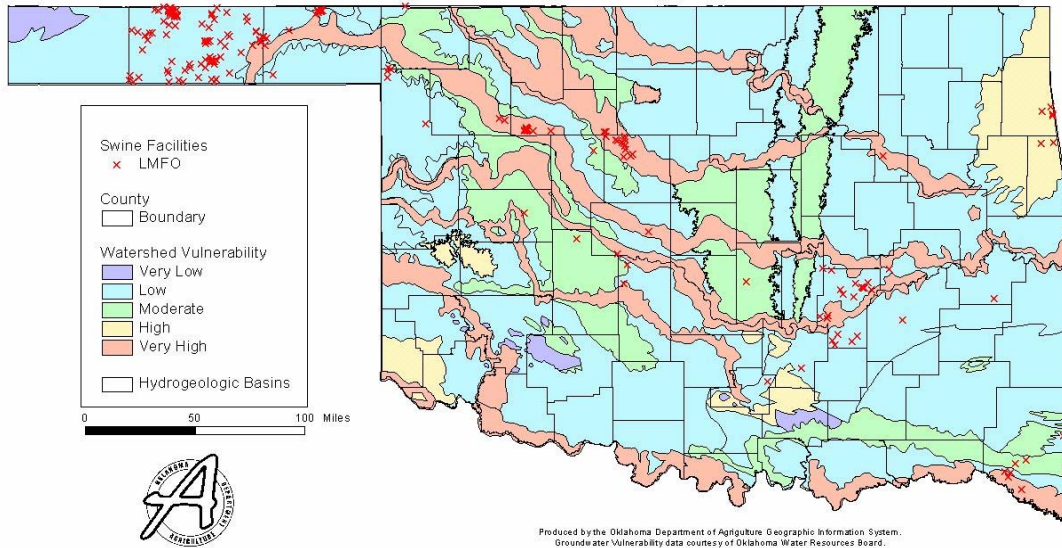
In 1998, the average worker earned \$300 per week before taxes and social security were deducted. Their rent was \$420-\$485. After rent and meals were deducted by Seaboard, little money was left (Bartlett 7). With overtime pay, workers make around \$23,000 a year (Lowitt 110).

The Impact of Hog Farms: Environmentally

Environmentally, even the strongest of advocates of the mega hog farms have admitted there are problems. The primary problems are odor, water pollution, and the depletion of the Ogallala Aquifer. Overwhelmingly, the most obvious problem is stench—in one facility alone over 40,000 hogs are confined in 44 buildings. Exhaust fans run continuously to pump out ammonia, mixed with grain dust, fecal matter, and hydrogen sulfide. Coupled with this is the odor of decaying carcasses. By law, carcasses must to be contained in closed dumpsters, but several hundred thousand hogs die prematurely each year and Seaboard can not always keep up with this. Often, carcasses lie rotting next to dumpsters for days (Bartlett 6). Since hogs produce twice the waste as a human, the Panhandle must dispose of waste that is the equivalent of a city of five million. To do this, open air lagoons are utilized. These lagoons,” Cesspools of shame”(NRDC 2001), pose a threat to groundwater. They are built in heavy clay soil and may not be leak proof (Mayda 355). In a study done in 2002, on the impact of hog CAFOs on Oklahoma City’s water supplies, the Oklahoma Water Resources Board concluded that the hog population in the Panhandle had the potential to impact downstream water quality. The Panhandle is in the watershed that supplies Oklahoma City with most of its drinking water. Pollution occurs with non-point pollution of water which is the result of lagoon leakage and spraying of lagoon effluents on crops (Oklahoma Water Resources Board 4). (See map below)

Swine LMFO's and Groundwater Vulnerability in Oklahoma

March, 2001



The Ogallala Aquifer has receded and the water levels in Texas County wells have dropped 50-100 feet over the last 30 years (Winne 1). A single hog farm in Woodward County received permits to use nearly 1.5 billion gallons of water a year (Sierra Club 5). Hog producers pump water from the aquifer, use it for swine production, and then pipe the effluent to customer's irrigation systems. Thus, waste water does conserve the use of ground water. Despite such conservation, the Aquifer has declined as the quantity of water the hog farms use is beyond the Aquifer's ability to replenish.

The Impact of the Hog Farms: Economically

The good news of the mega hog farms is surely economic, but even this is a mixed review. On the positive side, the hog processing in Guymon employs 1,100-1,400 people with an annual

payroll of \$30 million. Seaboard invested \$291 million in hog production and processing in the Panhandle from 1992-1997. Seaboard supplies most of its own hogs, but also buys hogs from other producers as long as they meet Seaboard's criteria (Hart, Maya 397). Because of shipments overseas, the international market surpasses the domestic market in the Panhandle (Lowitt 111). In 2007, 2,300 employees worked at the Guymon processing plant, 25% of businesses are Hispanic owned, and the hotels were full 95% of the time. The tax base abounds as the population has increased. For farmers, however, the story is not quite as positive. Local farmers have been forced out of farming or have become contract hog growers for Seaboard (Kerr Center 7). Due to the vertical integration of Seaboard, local suppliers of feed, fuel, and farm goods are often forced out of business (Sierra Club 3). The gross income of the pork industry in 1993 was \$65 million. This increased to \$424 million in 2001. Oklahoma is now the fourth largest producer of hogs in the nation, up from 23rd in 1987 (Luford and Hicks 268,269).

Conclusion

In our world, the economy of scale has taken over. Bigger seems to be better. In order to accommodate a population that has nearly quadrupled in less than one hundred years, there must be not only bigger ways, but also better ways to feed and care for this population, but at what cost? Must local culture, identity, environment, and economy be lost in order to do this? Locally, the net effect of the mega hog farms, barring economically, seems negative. Any visitor driving through the area is painfully aware of the odor from the mega hog farms and the processing plant. Globally, the Oklahoma Panhandle is feeding a huge amount of people, far beyond its own population. Is there a way the Panhandle can continue doing this without all the

negative effects? Various groups offer up solutions, but none of these solutions seem able to accommodate hog production at its current level. The Kerr Center advocates a return to local sustainable hog farms rather than corporate ones (Kerr Center). The National Resources Defense Council proposes to phase out and eventually ban hog lagoons. They also advocate sustainable hog farms that only produce the amount of waste that can be used as fertilizer (NRDC 47). The American Public Health Association has asked the federal government to impose a moratorium on all hog CAFOs (Earth Saves). Earth Saves believes the best solution to feeding a hungry world is a plant based diet. As it looks at the problems in the Panhandle and globally it offers this dire warning, “We may be looking at a doomsday denouement before the middle of this century. It is becoming increasingly certain that the water will run out, the land will no longer absorb the torrent of nutrient waste spread upon it, and the over-bred, antibiotic and hormone-injected animals will eventually succumb to their natural limitations. The factory system of food production will simply implode” (Earth Saves 5).

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