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Market Report	Yr Ago	4 Wks Ago	1/23/09
Livestock and Products, Weekly Average			
Nebraska Slaughter Steers, 35-65% Choice, Live Weight.	$89.20	$ *	$81.51
Nebraska Feeder Steers, Med. & Large Frame, 550-600 lb.. . . .	118.30	*	114.68
Nebraska Feeder Steers, Med. & Large Frame 750-800 lb.	97.75	*	95.43
Choice Boxed Beef, 600-750 lb. Carcass.	144.00	144.21	150.98
Western Corn Belt Base Hog Price Carcass, Negotiated.	52.95	49.51	59.44
Feeder Pigs, National Direct 50 lbs, FOB..	56.46	*	*
Pork Carcass Cutout, 185 lb. Carcass, 51-52% Lean..	55.80	57.20	57.80
Slaughter Lambs, Ch. & Pr., Heavy, Wooled, South Dakota, Direct..	84.63	*	90.00
National Carcass Lamb Cutout, FOB.	259.27	*	249.85
Crops, Daily Spot Prices			
Wheat, No. 1, H.W. Imperial, bu..	9.00	5.15	5.42
Corn, No. 2, Yellow Omaha, bu.	4.71	3.86	3.79
Soybeans, No. 1, Yellow Omaha, bu.	11.34	9.29	9.80
Grain Sorghum, No. 2, Yellow Dorchester, cwt..	8.41	5.18	5.34
Oats, No. 2, Heavy Minneapolis, MN , bu.	3.22	2.16	2.18
Feed			
Alfalfa, Large Square Bales, Good to Premium, RFV 160-185 Northeast Nebraska, ton..	135.00	*	*
Alfalfa, Large Rounds, Good Platte Valley, ton..	85.00	*	77.50
Grass Hay, Large Rounds, Premium Nebraska, ton..	*	*	85.00
Dried Distillers Grains, 10% Moisture, Nebraska Average.	177.50	138.00	145.50
Wet Distillers Grains, 65-70% Moisture, Nebraska Average.	58.75	48.13	48.50

*No Market

The U.S. hog industry, once primarily made up of small owner-operated crop-hog farms, has become dominated by large specialized operations characterized by low costs and improved technologies in livestock management. Such changes have triggered concerns over the dangers large Hog Feeding Operations (HFOs) are likely to pose to the environment. In 2007, the top ten states accounted for more than 85 percent of total U.S. hog production (Iowa (IA), North Carolina (NC), Minnesota (MN), Illinois (IL), Nebraska (NE), Indiana (IN), Missouri (MO), Oklahoma (OK), Ohio (OH), and Kansas (KS)). With such domination on production, these states are often the subject of environmental debate relating to hog production. When farmers are required to incorporate environmental measures in hog production, their costs of production increase. Metcalfe (2001) found that small HFOs have found it difficult to cope with such costs and many have exited the industry, while large operations have not been affected at the same level. Due to the variation of environmental regulations among states, other operations moved to states with lax regulations (e.g. NC prior to the late 1990s). Such regulations appear to have played a major role in shaping the structure of the hog industry.

Federal involvement in environmental regulations on HFOs began with the inception of the Clean Water Act of 1972. Federal regulations were increased in the 2003 revisions of the 1972 Act. The revised requirements incorporated further regulations on production areas and land application areas, including the requirement of Nutrient Management Plans (NMPs), and Best Management Practices (BMPs). While federal regulations must be met nationwide, many states have increased the number and stringency of nonpoint source pollution control. Despite the fact that states have until February 27, 2009 to implement the 2003 revisions, the top ten states have already adopted them. Our focus is to compare variation in current (2008) environmental regulation stringency among the top ten hog producing states.

State-Level Regulations versus Federal-Level Regulations

The variation of state-level environmental regulation stringency on HFOs stems from the legislation imposed at the state-level, since some states choose to place more stringent restrictions on HFOs than other states. Several regulations are required of all operations by the federal government (FED): waste management plans (WMPs), mandatory record keeping (MRK), odor abatement plans (OAPs), handling of dead swine (HDS), reports on waste spillage (RWS), nutrient management plans (NMPs), manure (dry and liquid) application setbacks (MAPs), cost share programs (CSPs) and AFO location setbacks (ALSB). In addition, all of the top ten states enforce: facility design approval (FDA); and construction and operation permits (COPs). However, variation in regulation exists within these ten states. For example, the states of NC, MN, NE, and KS have zoning requirements, while only MN and IL regulate hydrogen sulfide (HSR). While the federal location setback requirement (ALSB) is 1,000 feet, the individual state requirements range from 1,875 feet (IA) to three miles (OK). The federal government requires a manure application (MAP) setback of 100 feet to 300 feet, while state-required setbacks range from 500 feet (IN and OK) to 3,960 feet (IL).

Table 1 (below) compares the stringency of regulations of HFOs at the state-level. A '0' indicates that the type of regulation is not used at the state level; a '1' indicates that the type of regulation is enforced at the state-level; and a '2' indicates that the regulation is more stringent at the state level than the associated federal standard.

From a comparison based on the number of regulations, the states of NC and IL have the most stringent legislation, while the states of IA, MN, IN, OK and KS have the second highest stringency index value. The states of NE and MO rank third and OH is the lowest on the stringency ladder among the top ten hog producing states. As is evident from the regulations, individual states have tighter environmental regulations than the FED.

The focus of our study is to determine the implications of environmental regulations on the structure of hog farms. The effect of environmental regulations on industry structure is measured by the change in the share of hog marketing by different sizes of hog farms. A positive effect of environmental regulations on the share of small operation hog marketing suggests that the industry gets more competitive with environmental regulations, and that environmental regulation has the effect of protecting small hog operations. This may support the argument that environmental regulations were tightened to save small operations.

A wide range of outcomes are possible regarding short-run and long-run changes in the share of hog marketing of both small and large hog operations, output of large hog operations, and the equilibrium number of hog operations. The impact of environmental regulations depends on how those regulations affect the average costs for small HFOs and the marginal costs for large HFOs. Further research will provide additional information on the direction of change and whether such changes are significant enough to affect environmental policy considerations toward hog operations.

References:

Metcalfe, M. "U.S. Hog Production and the Influence of State Water Quality Regulation." *Canadian Journal of Agricultural Economics* 49(2001):37-52.

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Table 1: 2008 State and Federal Regulations on Hog Animal Feeding Operations

STATE	WMP	FDA	COPs	MRK	OAPs	ZONING	HDS	HSR	RWS	NMPs	CSP	ALSB	MAS	2008 INDEX
IA	1	1	1	1	1	0	1	0	1	1	1	2	2	13
NC	1	1	1	1	1	1	1	0	1	1	1	2	1	14
MN	1	1	1	1	1	1	1	1	1	1	1	1	1	13
IL	1	1	1	1	1	0	1	1	1	1	1	2	2	14
NE	1	1	1	1	1	1	1	0	1	1	1	1	1	12
IN	1	1	1	1	1	0	1	0	1	1	1	1	2	13
MO	1	1	1	1	1	0	1	0	1	1	1	2	1	12
OK	1	1	1	1	1	0	1	0	1	1	1	2	2	13
OH	1	1	1	1	1	0	1	0	1	1	1	1	1	12
KS	1	1	1	1	1	1	1	0	1	1	1	2	1	13
FED	1	0	0	1	1	0	1	0	1	1	1	1	1	9

Source: State websites, 2=extensive regulation enforced, 1=regulation is enforced, 0=regulation is not enforced