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# Conservation Compliance Under the House and Senate Versions of the 2013 Farm Bill: A Role for Empathy Nudging?

Hans J. Czap

*University of Michigan - Dearborn*, [hczap@umich.edu](mailto:hczap@umich.edu)

Natalia Czap

*University of Michigan - Dearborn*, [nczap@umich.edu](mailto:nczap@umich.edu)

Dary D. Lynne

*University of Nebraska-Lincoln*, [GLYNNE1@UNL.EDU](mailto:GLYNNE1@UNL.EDU)

Mark E. Burbach

*University of Nebraska-Lincoln*, [mburbach1@unl.edu](mailto:mburbach1@unl.edu)

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# CORNHUSKER ECONOMICS

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## Conservation Compliance Under the House and Senate Versions of the 2013 Farm Bill: A Role for Empathy Nudging?

Market Report	Yr Ago	4 Wks Ago	8/9/13
<b><u>Livestock and Products,</u></b>			
<b><u>Weekly Average</u></b>			
Nebraska Slaughter Steers, 35-65% Choice, Live Weight. . . . .	\$119.63	\$120.22	\$123.34
Nebraska Feeder Steers, Med. & Large Frame, 550-600 lb. . . . .	155.82	171.20	175.31
Nebraska Feeder Steers, Med. & Large Frame 750-800 lb. . . . .	143.61	152.84	163.63
Choice Boxed Beef, 600-750 lb. Carcass. . . . .	181.46	193.30	187.92
Western Corn Belt Base Hog Price Carcass, Negotiated. . . . .	88.05	97.69	98.51
Pork Carcass Cutout, 185 lb. Carcass, 51-52% Lean. . . . .	92.63	102.48	104.22
Slaughter Lambs, Ch. & Pr., Heavy, Wooled, South Dakota, Direct. . . . .	111.75	116.00	118.00
National Carcass Lamb Cutout, FOB. . . . .	322.53	275.66	273.11
<b><u>Crops,</u></b>			
<b><u>Daily Spot Prices</u></b>			
Wheat, No. 1, H.W. Imperial, bu. . . . .	7.83	6.89	6.78
Corn, No. 2, Yellow Nebraska City, bu. . . . .	7.83	6.96	5.71
Soybeans, No. 1, Yellow Nebraska City, bu. . . . .	16.41	15.19	12.82
Grain Sorghum, No. 2, Yellow Dorchester, cwt. . . . .	12.91	11.48	9.04
Oats, No. 2, Heavy Minneapolis, MN, bu. . . . .	3.88	3.85	3.92
<b><u>Feed</u></b>			
Alfalfa, Large Square Bales, Good to Premium, RFV 160-185 Northeast Nebraska, ton. . . . .	242.50	250.00	245.00
Alfalfa, Large Rounds, Good Platte Valley, ton. . . . .	220.00	180.00	165.00
Grass Hay, Large Rounds, Good Nebraska, ton. . . . .	155.00	150.00	160.00
Dried Distillers Grains, 10% Moisture, Nebraska Average. . . . .	302.50	225.00	214.25
Wet Distillers Grains, 65-70% Moisture, Nebraska Average. . . . .	115.50	82.50	77.00

Current and past farming practices have led to significant environmental degradation in the form of soil erosion (sediments), as well as fertilizer and chemical related water pollution. The United States Department of Agriculture (USDA) has long tried to implement policies to temper such negative effects on the environment. The 2008 Farm Bill which currently guides agricultural and related environmental/conservation policy is being revised on this front. The United States Senate and the House of Representatives are each currently proposing a version of the 2013 Farm Bill to change the existing system, making it more efficient in achieving environmental (and other food related) goals, while also seeking significant spending cuts. Both versions remove direct payments to farmers. A key difference between the two proposals is in the changes to crop insurance subsidies as related to conservation compliance, which is the focus of this study. While both proposals continue these subsidies, the version passed by the Senate makes this subsidy conditional on conservation compliance, whereas the version passed by the House provides this subsidy without such compliance.

Traditional economic models that presume profit maximizing-only behavior are ill-suited for predicting behavior in this environmental protection context. Other psychological factors, going beyond and transcending the usual exclusive focus on self-interest only as fed by financial incentives, may be highly relevant. The key objective in this project is to use experimental evidence related to such factors, while comparing the effectiveness of the two proposed policy designs and three modified versions and provide policy guidelines on which approach to favor.

The experiment was conducted in June, 2013, with participants playing the role of Upstream Farmer (UF) or Downstream Water User (DWU). The role for each participant was determined using a quiz on farming



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knowledge, with the top 50 percent of performers taking the role of an UF. Decisions by the participants determined their financial gain in the game, with average cash earnings of \$43.60 for a 60-90 minute session. The choices available during the first ten rounds of the experiment reflected the current policy design (under the 2008 Farm Bill). The subsequent ten rounds were designed to match the proposed changes in the Senate Bill, House Bill, or one of three additional variations introduced by the experimenters. The analysis focused on the observed differences in the choice of conservation technology (CT) by the UF, which impacted own profits as well as profits of the DWU. A higher choice of CT is assumed to decrease profits of UF (more costly), and increase profits of DWU (due to cleaner downstream water). Traditional economics would predict that a farmer would focus exclusively on maximizing profits and hence, that a policy focused on providing more financial incentives for environmentally friendly behavior (choice of higher CT) would always perform better.

The following table displays the overall ranking of the various policy designs considered in this study. The non-incentivized and incentivized designs correspond respectively to the House Bill and the Senate Bill. The two versions nudging for empathy, which is hypothesized to temper and restrain profit-only seeking behavior, are also based on the House and Senate Bills.

<b>Policy Alternatives</b>	<b>Overall Rank ("1" is the best)</b>
<b>Current Policy</b>	4
<b>Non-Incentivized (House Version)</b>	5
<b>Incentivized (Senate version)</b>	6
<b>Non-Incentivized + Nudging (House version with nudging)</b>	3
<b>Incentivized + Nudging (Senate version with nudging)</b>	2
<b>Mandatory</b>	1

These versions provide the DWU with the opportunity to nudge UFs for empathy, to encourage UFs to consider the effect of their actions on DWUs while “walking-in-their-shoes” (empathizing). Mandatory represents top-down regulation with assumed perfect enforcement. Because the highest average level of conservation is just one of the possible metrics for policy evaluation, we considered in addition, the highest share of over-compliance, the lowest share of non-compliance and the smallest share of zero conservation as measures of overall efficacy. The overall ranking of policy performance is calculated as the average ranking of each policy across these four measures of policy performance.

The 2013 Farm Bill proposals by the Senate and House of Representatives are not likely to achieve a better outcome in terms of environmental protection than the current (i.e. 2008 Farm Bill) policy. The mandatory policy performed generally best, but this is partially due to the assumption of perfect enforcement in the experimental set-up, which cannot be assumed for the real world. The most important insight is that empathy nudging, in combination with financial incentives is very effective in enhancing environmental quality. This is a relatively cheap and effective way to increase the effectiveness of policy, and should therefore receive increased consideration in the policy debate. In practical terms, policy makers would focus on opening communication channels between affected parties and farmers (such as town hall meetings, involving DWU in agricultural extension meetings, and organizing groups of UF and DWU focused on evolving a shared interest in higher water quality), including written/verbal reminders of the “shared we” (for example in the communication of the new policies and regulations to the farmer), and generally nudging both UF and DWU to walk in the shoes of others.

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Dr. Hans J. Czap  
 Department of Management  
 University of Michigan-Dearborn  
[hczap@umich.edu](mailto:hczap@umich.edu)

Dr. Natalia V. Czap  
 Department of Social Sciences (Economics)  
 University of Michigan-Dearborn  
[nczap@umich.edu](mailto:nczap@umich.edu)

Dr. Gary D. Lynne, (402) 472-8281  
 Department of Agricultural Economics  
 and School of Natural Resources  
 University of Nebraska-Lincoln  
[glynne1@unl.edu](mailto:glynne1@unl.edu)

Dr. Mark E. Burbach (402) 472-8210  
 School of Natural Resources  
 University of Nebraska-Lincoln  
[mburbach1@unl.edu](mailto:mburbach1@unl.edu)