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Conservation Compliance on Highly Erodible Lands

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Cornhusker Economics

Cooperative Extension

Institute of Agriculture & Natural Resources
Department of Agricultural Economics
University of Nebraska – Lincoln

Conservation Compliance on Highly Erodible Lands

| Market Report | Yr Ago | 4 Wks Ago | 7/16/04 |
|---|---------|-----------|---------|
| Livestock and Products | | | |
| Weekly Average | | | |
| Nebraska Slaughter Steers, 35-65% Choice, Live Weight | \$74.28 | \$87.06 | \$83.05 |
| Nebraska Feeder Steers, Med. & Large Frame, 550-600 lb | * | 131.19 | 133.92 |
| Nebraska Feeder Steers, Med. & Large Frame 750-800 lb | 92.88 | 113.12 | 115.60 |
| Choice Boxed Beef, 600-750 lb. Carcass | 128.80 | 147.92 | 140.81 |
| Western Corn Belt Base Hog Price Carcass, Negotiated | 58.41 | 76.04 | 77.56 |
| Feeder Pigs, National Direct 45 lbs. FOB | 31.70 | 42.36 | 43.27 |
| Pork Carcass Cutout, 185 lb. Carcass, 51-52% Lean | 66.17 | 80.15 | 82.19 |
| Slaughter Lambs, Ch. & Pr., 90-160 lbs., Shorn, Midwest | * | 97.50 | * |
| National Carcass Lamb Cutout, FOB | 233.64 | 238.56 | 229.58 |
| Crops | | | |
| Daily Spot Prices | | | |
| Wheat, No. 1, H.W. Omaha, bu | 3.31 | 3.76 | 3.60 |
| Corn, No. 2, Yellow Omaha, bu | 1.98 | 2.59 | 2.33 |
| Soybeans, No. 1, Yellow Omaha, bu | 5.62 | 8.73 | 6.87 |
| Grain Sorghum, No. 2, Yellow Columbus, cwt | * | 4.11 | 3.46 |
| Oats, No. 2, Heavy Minneapolis, MN, bu | 1.49 | 1.62 | 1.60 |
| Hay | | | |
| Alfalfa, Large Square Bales, Good to Premium, RFV 160-185 Northeast Nebraska, ton | 117.50 | 115.00 | 115.00 |
| Alfalfa, Large Rounds, Good Platte Valley, ton | 70.00 | 62.50 | 55.00 |
| Grass Hay, Large Rounds, Good Northeast Nebraska, ton | 72.50 | 57.50 | 62.50 |
| * No market. | | | |

The 1985 Food Security Act linked farm program payments to the conservation of soil throughout the United States by tying producer eligibility for commodity program payments to the adoption of certain on-farm resource conservation activities on highly erodible lands (HEL). By requiring producers who receive government payments to adopt conservation practices on HEL, this policy (HEL policy, hereafter) seeks to address the inconsistency between commodity programs that increase production and environmental programs designed to decrease environmental problems from expanded production.¹

While the link of government payments to conservation activities purports to induce producers/owners of HEL to adopt conservation practices when employing this land in their production process, producer compliance with the provisions of the HEL policy is by no means assured. The costs associated with the adoption of conservation practices might provide producers with incentives to not apply an approved conservation plan, yet claim government payments they are not entitled to. And this noncompliance is not unknown to the government agency responsible for HEL policy enforcement. Out of 745,000 producers receiving government payments in 1997, there were 50,000 producers audited and over 2,000 of them were found not

¹ The HEL policy provisions brought the farm commodity programs in line with federal conservation programs, such as the Conservation Reserve Program, where producers are compensated through direct payments for conservation activities. Examples of other attempts to integrate environmental considerations into agricultural policy include the Swampbuster Provisions for Wetland Conservation in the U.S. and the Cross-Compliance Provisions of the European Common Agricultural Policy (CAP) that tie eligibility for agricultural support payments to producer compliance with certain environmental standards (for a comprehensive review of the cross-compliance provisions of CAP see the Institute for European Environmental Policy website at www.ieep.org.uk).

actively applying an approved conservation plan (USDA 2000).²

In a paper that is forthcoming in the February 2005 issue of *Land Economics*, we introduce enforcement costs and producer noncompliance into the economic analysis of the policy on highly erodible lands. Specifically, the paper examines the economic causes of producer noncompliance with the provisions of the HEL policy. In addition, the paper focuses on the role of available policy tools (i.e., farm program payments, audits and penalties) in inducing conservation compliance when enforcement is costly, and examines the effectiveness of the current policy design in deterring producer noncompliance. The hypotheses generated from our analytical model are tested empirically with data provided by USDA.

The analysis shows that the current policy design where farmers found in noncompliance lose their government payments creates economic incentives for all producers that do not adopt conservation practices to masquerade as adopters and claim government payments they are not entitled to. The extent of producer noncompliance (and the level of adoption of conservation practices on HEL) depend on the size of government payments linked to producer participation in the HEL policy, the costs associated with the adoption of conservation activities and the enforcement policy of the government. Specifically, the share of producers in noncompliance is shown to increase with the costs of adopting conservation practices, and to fall with an increase in the audit frequency and/or an increase in the size of the farm program payments linked to the adoption of conservation practices. For noncompliance to be completely deterred, the analysis shows that the combination of enforcement parameters (i.e., audit probability and government payments withheld) should be such that the expected penalty exceeds the costs associated with adoption of conservation practices for all producers.

Regarding the equilibrium enforcement level, the analysis indicates that with penalties tied to the size of the government payments, policy enforcement depends on the audit probability which is determined, in turn, by the resource costs of monitoring producer compliance and the available budget to HEL policy enforcers. Specifically, the greater the monitoring costs and/or the lower the resources available to policy enforcers, the lower the audit probability and, thus, the lower the policy enforcement is expected to be.

In addition to identifying the economic determinants of producer (non)compliance with the provisions of the policy on HEL and the monitoring policy of the government, the

results of this paper provide insights on the likely effect of the latest Farm Bill on producer compliance and adoption of conservation practices on highly erodible lands. In particular, the positive relationship between producer compliance and the size of the farm program payments suggests that the increase in government support to agriculture through commodity and conservation payments enacted under the latest Farm Bill can be expected to reduce the extent of producer noncompliance and increase the adoption of conservation practices on HEL.

Finally, it should be pointed out that while our research focuses on the policy on HEL, the results of this study have implications for the Swampbuster Provisions for Wetland Conservation in the U.S., as well as for the European Cross-Compliance Policy Provisions that tie eligibility for agricultural subsidies to producer compliance with certain environmental standards.

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² USDA. 2000. *1997 FSA Status Review Results*. Natural Resource Conservation Service, USDA.