



EPRI Greenhouse Gas Emissions Offsets Workshop
Creating N₂O Emissions Offsets in U.S. Agriculture
Farmer Perspective

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Introduction

- AFT's Agriculture & Environment Initiative
 - Help farmers and ranchers play a major role in improving our environment while also expanding sources of revenue
- Ag Conservation Innovations
 - Innovative solutions to challenges farmers face in improving their environmental performance
 - Major emphasis to accelerate adoption of conservation practices including N mgt



Opportunity

- Significant opportunity for farmers to improve N management to reduce N use
 - Chesapeake Bay CEAP – only 13% of crop land acres receive optimum N mgmt.
 - 2005 AFT/Agflex survey – less than 15% use in-season testing for N applications
- Farmers willing
 - BMP Challenge – over 16,000 acres in 10 states
 - On-Farm Network – thousands of strip trials and growing



Barriers to Behavior Change



- Major Barriers - lack of information and technical assistance, additional time, and either real or perceived risk to income
- Fear of risk led to development of BMP Challenge

2000-2010 RESULTS	Nutrient BMP CHALLENGE®	Reduced Tillage BMP CHALLENGE®	Planned Nitrogen Reduction	Totals
Total acres, 2000-2010	4,819 acres	2,313 acres	9,069 acres	16,201 acres
BMP yield, average and range	160.3 bu/acre 56.3-237.0	155.7 bu/acre 31.9-237.0	150.5 bu/acre 55.7-229.4	
Check-strip yield, average and range	167.0 bu/acre 49.8-230.0	165.1 bu/acre 26.2-242.0	162.4 bu/acre 63.1-264.0	
Average farmer net returns after fertilizer or tillage savings	(\$4.81) (\$89.85)-\$109.50	(\$13.48) (\$156.77)-\$130.20	(\$35.29) (\$330.00)-105.24	
Total N use reduction	180,397.9 lbs	-	244,199.1 lbs	424,597.0 lbs
Estimated sediment reduction	-	3,469.2 tons	-	3,469.2 tons
Estimated P load reduction	-	4,625.6 lbs	-	4,625.6 lbs
Estimated CO ₂ reduction	503.5 lbs	1,156.4 lbs	681.5 lbs	2,341.4 lbs



Barriers to Behavior Change



- ERS/AFT environmental services payment study
 - High discount rate for future payments
 - Late adopters especially more receptive to up-front payments
- Other ERS studies
 - \$70 per acre to get 50% adoption rate
 - Risk-averse farmers would require \$37 per acre to adopt split-N practice
- Sometimes takes years to perfect/sometimes you never do



Farmers and GHG Markets



- Many farmers will be interested – CCX experiment
- Already participate in federal cost share on millions of acres
- Can't be too burdensome
 - GHG markets will only be add-on revenue; it can't get in the way of production and take too much time
- Interplay with USDA conservation priorities and GHG markets
 - Synergistic or antagonistic



Farmers and GHG Markets



- Continuum of protocols from CCX to European Union ...from MSU to ACR
 - farmer confusion/uncertainty will limit participation
- Bottom line: We don't know yet how farmers will react
 - need to get out in the field and test; that is the purpose of the GHG CIGs
 - Delta Institute/NWF GHG CIG project – farmer implementation of nutrient practice and compare protocols (AFT cooperating partner)



THANK YOU!



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American Farmland Trust