The AgraGate Experience & Lessons Learned

David Miller
Chief Science Officer
AgraGate Climate Credits Corp &
Director of Research
Iowa Farm Bureau Federation
- An entity for carbon credit aggregation owned by Iowa Farm Bureau Federation
- First licensed aggregator on the Chicago Climate Exchange (2003)
- Aggregation Specialists – Building a nation-wide network of contract facilitators in every state.
- Handling about 6 Million Carbon Credits annually
- “Country Elevator of Carbon Credits”

- General Farm Organization
- Part of the American Farm Bureau Federation
- 155,000 member families
- Political Representation
- Member Services
Services

- Information
- Enrollment
- Certification
- Verification
- Credit marketing
U.S. Farmer Participation in CCX

- 16 million acres nationally in 36 states
- 9,000 farmers, ranchers & landowners
- 25 professional verification entities approved
  - “green jobs” employment & income is a reality at CCX
- Tens of millions of dollars in new income through global environmental services

- 2 major soils aggregators
  - AgraGate & Farmers Union
- Several minor aggregators

  - 4.5 million acres no-till
  - 2 million acres grass establishment
  - 5 million acres rangeland
  - 0.5 million acres afforestation
  - 4 million acres managed forest
  - ag methane projects
Agricultural soil sequestration offsets in CCX

- No-till, New Grasslands, Rangeland
- CCX Special Committee on Soil Carbon (scientific committee) provided guidance on annual carbon gains, geography
- 20% Implicit Reserve to mitigate against post-contract reversals
- 20% Explicit Reserve to mitigate against in-contract reversals
- Full accountability in-contract
- Avoided perverse incentive to till if only “new” no-tillers allowed in
- 100% annual certification; 10% visual inspection;
- Pilot project on satellite imagery
## CCX Offsets Issued 2009

<table>
<thead>
<tr>
<th>Offset Type</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Soil Carbon Offset</td>
<td>10,857,400</td>
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<tr>
<td>Forestry Offset</td>
<td>6,022,000</td>
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<tr>
<td>Landfill Methane Offset</td>
<td>1,840,700</td>
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<tr>
<td>Renewable Energy Offset - Wind</td>
<td>1,557,200</td>
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<tr>
<td>Energy Efficiency Offset</td>
<td>1,413,400</td>
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<tr>
<td>Coal Mine Methane Offset</td>
<td>1,159,300</td>
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<tr>
<td>Renewable Energy Offset</td>
<td>1,041,700</td>
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<tr>
<td>Fuel Switching Offset</td>
<td>904,200</td>
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<tr>
<td>Agricultural Methane Offset</td>
<td>483,800</td>
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<tr>
<td>Renewable Energy Offset - Biomass</td>
<td>472,300</td>
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<tr>
<td>Waste Disposal Offset - HFC Destruction</td>
<td>255,700</td>
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<tr>
<td>Ozone Depleting Substance Destruction Offset</td>
<td>175,300</td>
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<tr>
<td>Renewable Energy Offset - Biogas</td>
<td>55,800</td>
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<tr>
<td>Wastewater Treatment Methane Recovery Offset</td>
<td>44,300</td>
</tr>
<tr>
<td>Organic Waste Disposal Methane Offset</td>
<td>25,700</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>26,308,800</strong></td>
</tr>
</tbody>
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Lessons Learned

• The US “voluntary” market has allowed ag & forestry to “learn by doing”

• Ag & Forestry offsets are the oil that will enable a GHG reduction program to run smoothly

• As the carbon market matures, more opportunities are likely to emerge for ag & forestry

• Over-estimation of offset supply

• Political uncertainty can kill fledgling markets
  – Specific authority & recognition of ag & forestry offsets
  – USDA needs to be the lead agency on ag & forestry offsets
  – “grandfathering in” of early action credits

• Perfection is the enemy of progress & success
  – Mechanisms designed for developing countries are not necessarily good for the US
  – Zero tolerance does not work for ag
  – Reasonable operating criteria for offsets – must work on “working lands”
Lessons Learned

- Contract length matters
  - Land control turnover
  - Commitment
- The paperwork requirements may be more than most farmers will put up with.
- Offsets vs USDA programs
- Scalability matters
- Adaptability to weather & production circumstances matters

- Voluntary eco-system markets are not reliable enough for most farmers
- Myths & perceptions are hard to overcome
- There are a lot of people who are quite content to dictate production practices to farmers without understanding the ramifications of such practices
Approaches to Greenhouse Gas Regulation

- Traditional Command and Control
  - Regulatory agency sets standards
    - Specific technologies (scrubbers)
    - Performance (tons, tons/unit output)

- Cap and Trade
  - Regulatory agency sets overall objective (total allowable emissions)
    - Allocates or auctions emission allowances (auction = tax)
    - Firms must obtain allowances in order to emit a pollutant
      - Firms can receive allowances, purchase allowances, or reduce emissions

- Cap and Trade with Offsets
  - Unregulated firms can receive credits for reducing emissions
  - Regulated firms can purchase offset credits to meet regulatory requirements ("offsetting emissions")

- Emission Taxes
  - Internalizes public damage
  - Equates costs of abatement
Emerging Issues for Carbon Markets

- Scope of Coverage
- Eligibility
- Consistency of Rules
- Financial Impacts
- Environmental Considerations
- Unintended Consequences
Issues for Ag & Forestry

- Who regulates?
- Will offsets be included?
- Who will set standards for ag & forestry?
- Effects on ag inputs
- Effects on energy markets
- Effects on economy
- Linkages to world markets
- Fungibility

Key Carbon Offset Issues (RSVP&E)

- Real – Quantification methodology
- Surplus – Additionality measures
- Verified – 3rd party certification
- Permanence – Duration & reversibility
- Enforceable – Contract terms & ownership
CCX Offset Projects

- As science directs, foster emission reductions all sectors: low cost, win-win
  - Landfill, agricultural and coalmine methane capture/destruction
  - Agricultural soils best management practices
  - Afforestation & forest management
  - Fuel switching, renewables
- All projects must be independently verified by an approved entity
- CCX Offset Rules can be found at:
  - http://www.chicagoclimateexchange.com/docs/offsets/CCX_Rulebook_Chapter09_OffsetsAndEarlyActionCredits

**Predictable:** facilitate carbon finance

**Additional:** beyond regulation, recent

**Verifiable:** eligibility, quantity, ownership

**No cherry picking** – emitters must take entity-wide reductions

**Fungible:** All Carbon Financial Instruments are equivalent

**Avoid perverse incentives**

**Conservative crediting**

**Reserve pools for sequestration assurance**
Composition of CCX Domestic Offsets Pool through April 2009

US Offset Projects (Type)

- Methane Destruction: 56.26%
- ODS Destruction: 1.99%
- Renewable Energy: 2.33%
- Renewable Energy - Biogas: 0.004%
- Agricultural Soil Carbon: 33.23%
- Energy Efficiency: 0.01%
- Forestry: 6.12%
- Fuel Switching: 0.05%
CCX CFI spot and derivatives volume 2004-2008

The chart shows the volume of CCX CFI spot and derivatives from 2004 to 2008. The data is divided into options, futures, and cash transactions. The chart indicates a significant increase in volumes from 2007 to 2008, with a notable peak in 2008.
Annual Average* Price for CCX CFIs
2003-2008

* Volume-weighted average for spot market trades
Total Ag Net Returns in 2025*

- Improved returns are a result of:
  - Reductions in corn & soybean acres
  - 23% reduction in hogs
  - 13% reduction in cattle
  - Reductions in other production

*University of Tennessee analysis, October 2009
Asking the Right Questions

- What can agriculture and forestry do to mitigate carbon emissions?
- Focus is on reductions:
  - Less nitrogen
  - Less cattle
  - Reduced stocking rates
  - Land-use change
  - Afforestation
  - Grasslands
  - Forest preservation

- How can we achieve global food security in a carbon constrained world?
- Focus on resource use efficiency
  - Output per unit of input
  - Increased food production
  - Technology solutions
  - Minimizes land-use change
  - Resource utilization
    - Managed forest
    - Grazing efficiency
- Adaptation
US

Application rates (kg N/ha)

Maize yield (t/ha)

PFP - N

China

Application rates (kg N/ha)

Yield (t/ha)

Kg harvest product per kg N applied
Issues for Future Market Design

- Are offsets ever appropriate for land-use change?
- Can offsets stimulate efficiency gains?
  - Baseline issues
- Tradeoffs between “accuracy” and monitoring costs
- Reconciling measured data with verification costs
- Resolving conflict of “early adopters” with additionality rules
- What constitutes a “reversal”?
- “Backward looking” liability
  - Crediting permanence
  - Role of reserves
- Statistical validity of program design
Concluding Thoughts

• Farmers are skeptical of claims that carbon opportunities will be good for ag
• Policies that result in a sector shrinkage are not going to be embraced
• Carbon emission reductions need to be measureable, verifiable, and consistent with the over-arching goals of producing food, feed, fiber and fuel
• Agriculture has already proven they can provide offsets at scale if the protocols are practical and reasonable
• A growing economy may need to consider GHG intensity reductions as well as absolute reductions.
Let us remember:

• For society as a whole, there is a very strong correlation between energy use and standard of living. Energy makes manual labor more efficient; is a catalyst for transformation of ingredients and raw products to usable goods; and energy extends the capabilities of the human mind.

• For society to prosper, it must grow. The debate cannot become one of, “maintaining the status quo with less”. It must be a debate about “how to do more with what we have.”
Questions?

For more information

www.agragate.com

Info@agragate.com