CLIMATE SMART AGRICULTURE & THE ROLE OF CARBON MARKETS

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CONTENTS

- The Coalition on Agricultural Greenhouse Gases (C-AGG)
- Climate Change Mitigation: What Role for Agriculture?
- Carbon Markets and Environmental Service Markets
- What does the Future Hold?
C-AGG is the leading US multi-stakeholder coalition focused on creating voluntary, market-based and incentive-based sustainable agriculture and climate change solutions for farmers, ranchers, and society.

C-AGG believes agriculture and working lands can play a key role in reducing GHG emissions worldwide.

With innovation and the right opportunities, farmers and ranchers can combat climate change while becoming more efficient, productive, sustainable – and more profitable.
WHAT IS C-AGG?

- 2009
- 150+ participants
- 3 national meetings per year, intermittent workshops
- Focus on monetizing GHG emissions reductions and other ecosystem services from agricultural sector
HOW DOES C-AGG OPERATE?

- We create partnerships and build consensus and capacity to catalyze and accelerate change across organizations and regions
- We support sustainable agriculture supply chain initiatives, GHG & CSA goals
- Strong PPP with USDA to support market based GHG & ecosystem market opportunities for agriculture

www.c-agg.org
Historical Policy Context

- Role of soil C sequestration and GHG mitigation opportunities for US agriculture has some colorful history…
UNFCCC & AGRICULTURAL MITIGATION, TRADING MARKETS

Kyoto (1997) Terrestrial sinks important negotiation point


2017 US WITHDRAWAL FROM PARIS AGREEMENT
LEAVING ASIDE THE POLICY UNCERTAINTY FOR THE MOMENT....

CARBON MARKETS AND ECOSYSTEM SERVICE MARKETS
2011 – USDA 1st GHG Conservation Innovation Grant (CIG) projects ($7.4M)
• C market methodologies and C credits
• C-AGG financial support to convene 8 projects at our meetings
• Significant knowledge gained & shared
• Feedback loop to USDA

2015 – USDA 2nd cohort GHG CIG projects ($10.1M)
• GHG CIGs ($3.9M) (9 projects)
• Environmental Markets ($2.1M) (6 projects)
• Innovative Conservation Finance ($4.1M) (8 projects)
CURRENT N. AMERICAN CARBON OFFSET MARKET LANDSCAPE FOR AGRICULTURE

MARKETS
- Compliance Market
- Voluntary Market*

PROTOCOLS
- Livestock Manure Management
- Rice Management
- Compost Additions
- Organic Waste Diversion
- Nutrient Management
- Avoided Conversion of Grasslands

REGISTRIES
- California Environmental Protection Agency Air Resources Board
- American Carbon Registry
- Climate Action Reserve
- VCS: Verified Carbon Standard

*A complete list of all of the currently approved agricultural methodologies/protocols can be found at www.c-agg.org
Societal benefits of agricultural ecosystem services include enhanced:

- water quality
- water conservation
- wildlife habitat
- biodiversity, and
- other environmental attributes.
Many agricultural activities that sequester C and reduce GHG also improve:

- agricultural sustainability
- soil health and productivity
- soil moisture retention
- soil erosion
- resilience to climate change.
The New Green Revolution

 Requires:

➢ Context-specific information on how to reduce GHG & enhance other environmental attributes

➢ Decision support systems and business case scenarios to inform practice changes, trade-offs

➢ Low-cost, user-friendly, yet robust tools to measure, report and verify (MRV): imperative for markets
Technology & Data

We keep hearing about big data – with good reason.

Precision farming tools which use GPS and GIS and VRT and monitor inputs and yields and link soil health to productivity and measure and track outputs – at subfield scales -- will soon replace data intensive systems we are now using for MRV, for instance, and will create close to full support systems to inform decision-making, economics, business case scenarios, and track outcomes.
WHAT DOES THE FUTURE HOLD?

Systems-based & landscape scale approaches, rather than ‘singular’ activities: 1-gas, 1-activity

Stacked and bundled credits that monetize multiple beneficial environmental attributes

Research: better info on ag systems and landscape impacts – including for GHG
QUESTIONS?

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