

Identifying and Monetizing Agricultural Programs that Promote Conservation, Sustainability, Carbon, or Regenerative Ag

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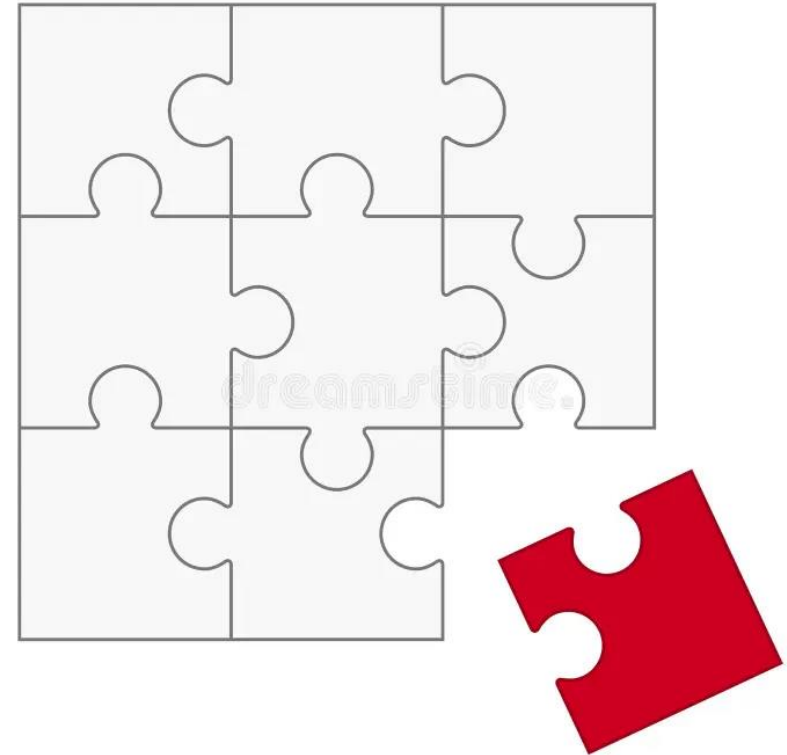
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Typical Topics

- Crop Price Outlook
- Marketing Strategies
- Crop Insurance
- Risk Management
- Crop Budgets
- Production Economics
- Agricultural Lending



WHY

SHOULD

WE CARE?



Potential Pathways for Monetization

- Cost Share
 - Ex. USDA NRCS
- Practice Based Payments
 - Ex. Bayer Carbon Program
- Price Premiums
 - Ex. ADM Deforestation Free Soybeans
- Carbon Insets/Offsets
 - Ex. Credit per MT CO₂ eq



Categories

- Soil Health
- Nitrogen Management
- Input Utilization/Efficiency
- Forestry and Wildlife Habitat
- Energy Efficiency
- Water Management
- Waste Management
- Carbon Beneficial Practices
- Species Diversification



Farming Practices

- Cover crops
- Low-till or no-till
- Nutrient management
- Enhanced efficiency fertilizers
- Manure management
- Feed management to reduce enteric emissions
- Buffers, wetland, grassland management, and tree planting on working lands
- Agroforestry and afforestation on working lands
- Afforestation/reforestation and sustainable forest planting for high carbon sequestration rate
- Maintaining and improving forest soil quality
- Increasing on-site carbon storage through Forest Stand Management
- Alternate wetting and drying on rice fields
- Pasture practices, such as prescribed grazing or legume interceding
- Soil amendments, like biochar

Why Participate?

- Improved Yields?
- Long Term Improvements to Soil Health
- Erosion Control
- Water Quality Improvements
- Wildlife Habitat
- Land That is Not Profitable to Farm
- Other Environmental Benefits
- Improve Profitability?
 - Higher Price
 - Lower Cost
- High Cost of Capital
- Potential Long Term Productivity Gains / Return on Investment
- Direct Payments

Why Not to Participate

- Time / Inconvenience
- Counterparty Risk
- Don't Trust the Program or Program Provider
- Don't Have the Data
- Don't Want to Provide Access (Data or Physical Location)
- Benefit / Return to Low
- Costs Too Much
- Holding Out for a Better Offer
- I Don't Farm for Government Programs

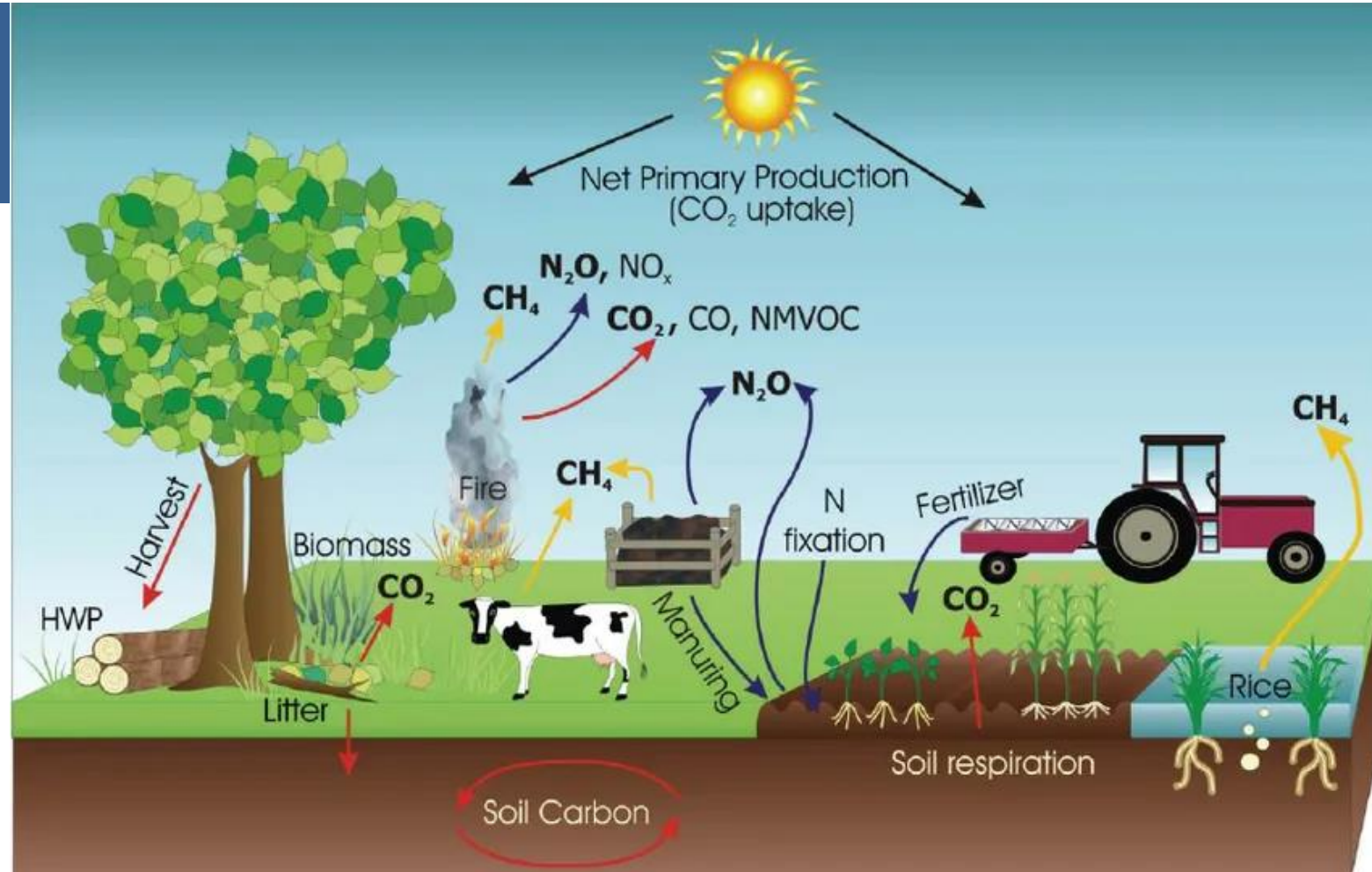
Where Are You?

- Not interested
- Do not have enough information
- Interested, but don't think the timing is right
- Interested, but hesitant to commit
- Interested, need a program that matches my needs



Types of Markets

- 1. COMPLIANCE MARKETS**
– Federal, state, or local government mandates or regulations.
- 2. VOLUNTARY MARKETS** –
Contracts between private entities.



Data and Record Keeping

- To monetize all markets data will be imperative.
- Collection, organization, and analysis of high-quality data overtime will be essential.
- Establish a baseline from which changes can be compared.
 - Agronomic
 - Environmental
 - Economic

What Should Landowners / Producers Look for in a Contract?

- Land use (pasture, forest, cropland) and crop mix (corn, soybean, specialty crops etc.)
- Spatial unit
- What are you being paid for?
- Practices to be implemented
- Length of contract
- Reporting / data sharing /validation requirements
- Property access requirements
- Payment mechanism
- Payment timing
- Will payments cover implementation costs?
- Does this restrict participation in other programs?
- Terminology, clauses, and definitions
- Exit / failure to deliver

Ensure that you can comply with the contract for the entire life of the agreement.

Beware of fine print and definitions.

Always
obtain legal
advice.

Partial Net Returns Analysis or Return on Investment

- Changes in revenue
 - Carbon credit payments, practice payments, commodity price premiums
 - Changes in yield or companion revenue
- Changes in cost
 - Implementation costs
 - Cost share %
 - Data collection, compliance, and transaction costs
 - Time

Cost Share / Practice Payment Programs

- USDA NRCS
 - Conservation Stewardship Program (CSP),
 - Environmental Quality Incentives Program (EQIP)
 - Climate Smart Agriculture Partnerships
 - Regional Conservation Partnership Programs
- Private
 - ADM Regenerative Ag
 - Louis Dreyfus Regenerative Ag
 - Regen Ag – Bunge
 - Cargill RegenConnect

Carbon Markets

- Carbon Markets
 - Carbon offsets
 - Carbon insets
- Seven principles for responsible participation in voluntary carbon markets

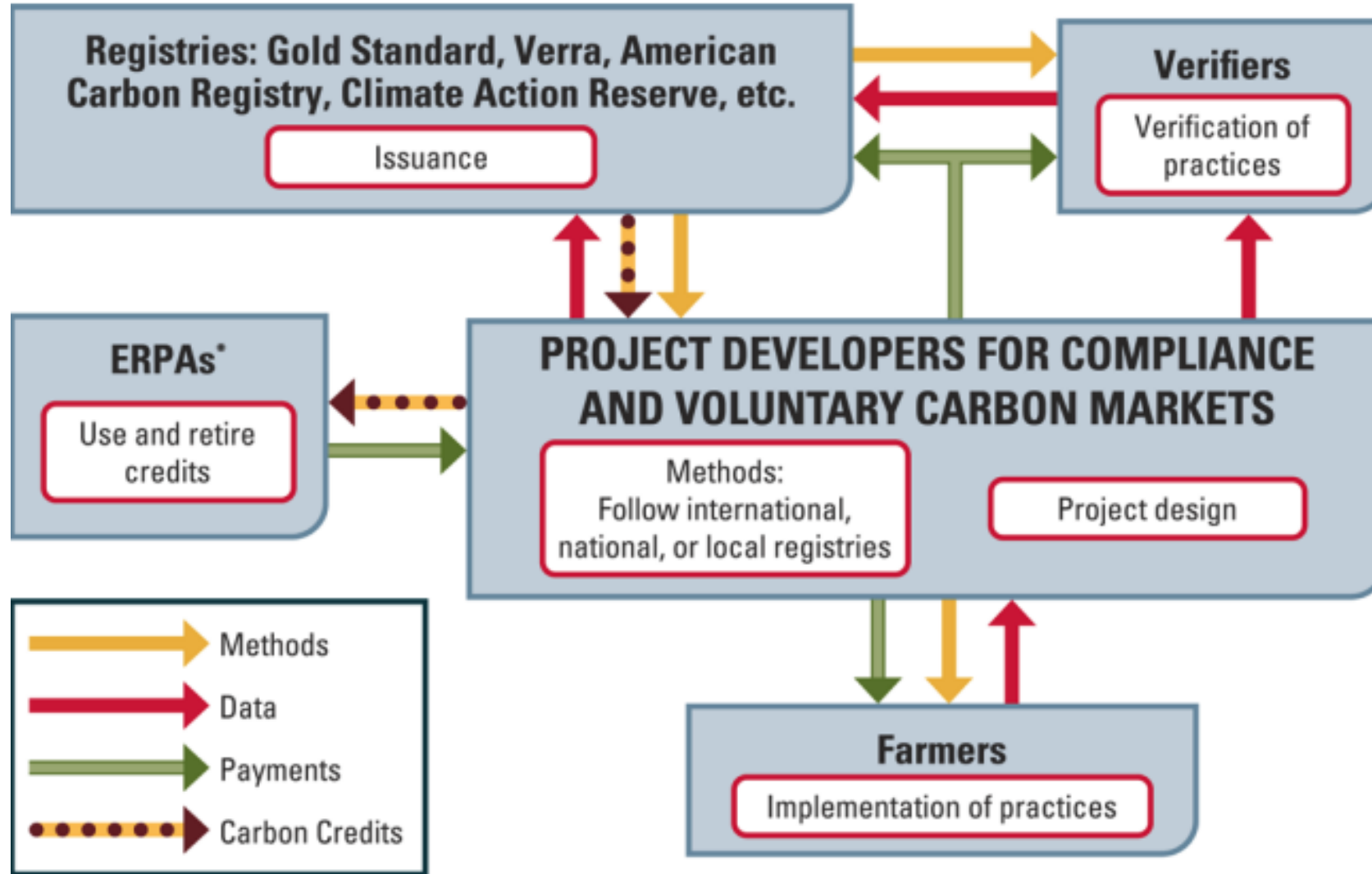


The Difference Between Offsets and Insets

- **Offsets** are reductions in GHG emissions not directly related to the business of the company purchasing them.
 - They are typically used to offset direct emissions from the companies.
 - The purchases are often from different sectors than the business of the company.
- **Insets** are reductions of the indirect GHG emissions that are outside the company's direct control but are part of a company's supply chain and customer emissions.
 - Insetting is an important part of companies' commitment to address the emissions in their supply chains, which customers, consumers, shareholders, and environmental groups view as their responsibility.



Figure 1. Traditional Carbon Offset Generation



* ERPAs: Emission Reduction Purchase Agreements

Carbon Inset Markets

- Working with a company you know and hopefully trust.
- Stability of payment and reduced counterparty risk.
 - Ease of implementation?
- Integration of production and financial systems beyond the farm gate.
- Access to physical locations, agronomic data, and financial records.

Carbon Inset Markets

Practice Based Programs

- Carbon purchaser within the ag supply chain.
- Farms implement practices determined by the carbon purchaser and are paid by the practice.
- Contract length varies.
- Usually limited to new acres of a practice.

Outcome-Based Programs

- Carbon purchaser pays based on the amount of carbon sequestered or mitigated.
- Measurement can occur through soil sampling, agronomic data, satellite imagery, or computer modeling.
- Contract length varies.
- Usually limited to new acres of a practice.

Seven Principles for Responsible Participation in Voluntary Carbon Markets

- Carbon credits and the activities that generate them should meet credible atmospheric integrity standards and represent real decarbonization
 - Additional, unique, quantifiable, validation, verification permanence, and baseline

Seven Principles for Responsible Participation in Voluntary Carbon Markets

- Credit-generating activities should avoid environmental and social harm and should, where applicable, support co-benefits and transparent and inclusive benefits-sharing.
 - Other benefits of practice adoption
 - Water quality
 - Erosion mitigation

Seven Principles for Responsible Participation in Voluntary Carbon Markets

- Corporate buyers that use credits (“credit users”) should prioritize measurable emissions reductions within their own value chains.
 - Carbon insetting and working with input suppliers and commodity purchasers.

Seven Principles for Responsible Participation in Voluntary Carbon Markets

- Credit users should publicly disclose the nature of purchased and retired credits
 - Transparency
 - Accountability

Seven Principles for Responsible Participation in Voluntary Carbon Markets

- Public claims by credit users should accurately reflect the climate impact of retired credits and should only rely on credits that meet high integrity standards.
 - Legitimacy of claims
 - Ability to quantify and validate

Seven Principles for Responsible Participation in Voluntary Carbon Markets

- Market participants should contribute to efforts that improve market integrity
 - Stable markets that are transparent, resilient, and predictable

Seven Principles for Responsible Participation in Voluntary Carbon Markets

- Policymakers and market participants should facilitate efficient market participation and seek to lower transaction costs
 - Cost efficient relative to the benefit provided
 - Do revenues exceed the economic costs



Evaluate individual circumstances

SHOULD I PARTICIPATE?

Moving Forward

- Unlikely to be a priority in the current administration.
- Private companies will continue to offer contracts.
- Evaluate if this is a fit for your operation.

Carbon Programs For Row Crop Producers

- Bayer Carbon (ForGround)
- CIBO
- Ecosystem Services Market Consortium (ESMC)
- Indigo
- Gradable
- Nori
- Nutrien
- AgriCapture
- Locus AG CarbonNOW
- Truterra
- Soil and Water Outcomes Fund (SWOF)
- Cargill RegenConnect
- Corteva
- Agoro
- Farmers Edge
- ARVA Intelligence Corp.
- Kellogg's InGrained
- Perdue AgriBusiness
- Siemer Milling STAR Rewards Program

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THANK YOU

