



Unlocking the Carbon Value in Agricultural Practices

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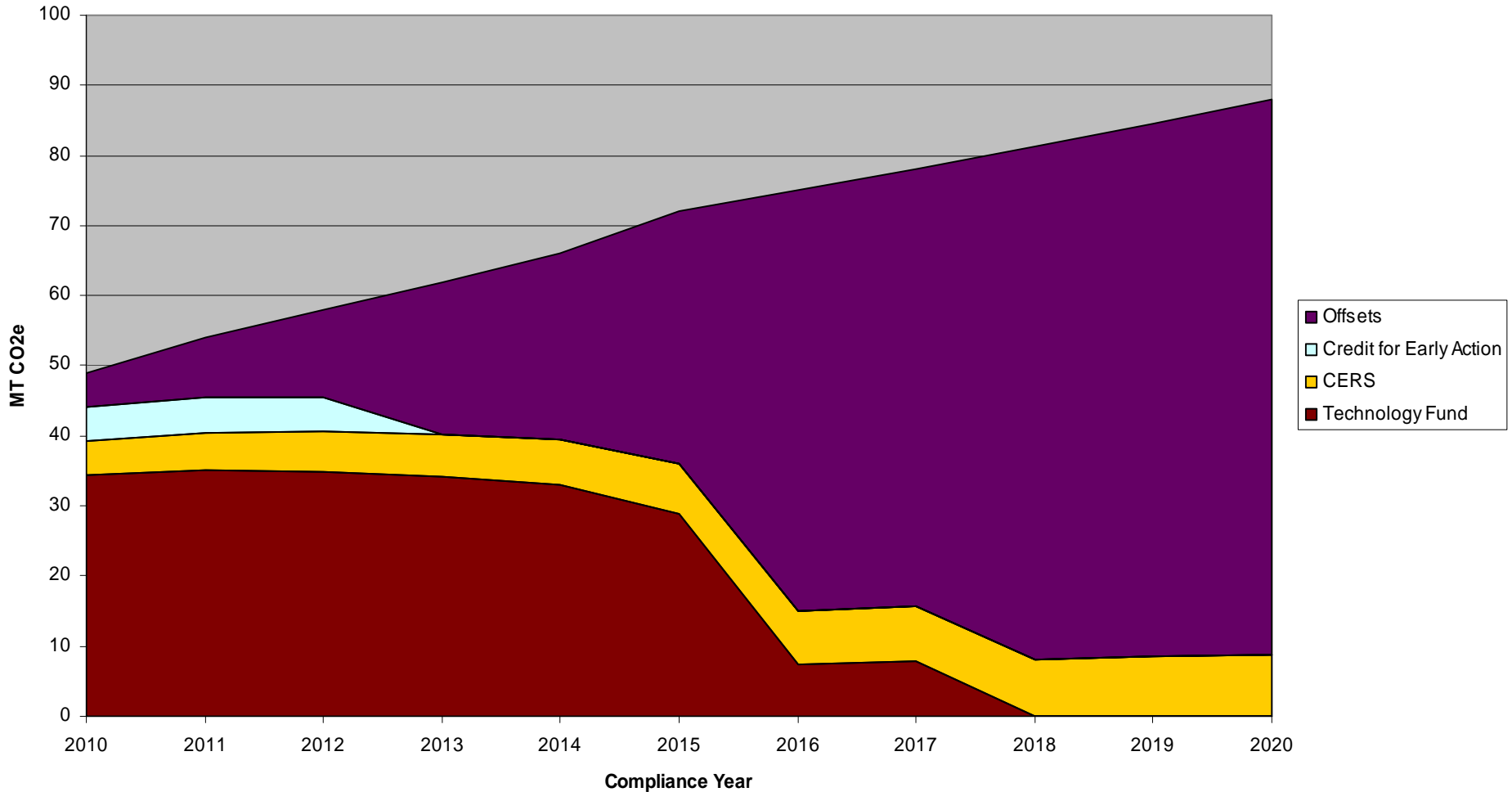
What Practices Are We Talking About?

- No/low till
- Manure management
- Anaerobic digestion of agricultural waste
- Afforestation on marginal agricultural land
- Reduces release of nitrogen from agricultural soils and reduces the need for fertilizer
- Reduces release of methane to the atmosphere and can be an alternate source of energy
- Biogas from anaerobic digestion displaces fossil-based electricity or distributed natural gas
- A tree will absorb approximately 1T of CO₂ during a 40 year growing cycle

What is The Carbon Value?

- This is an area of enormous uncertainty
- The current design of the Regulatory Framework delivered by the government in April indicates that the offsets system will be expected to play a major role
- It is far easier to calculate what the demand is going to be than what the supply may be.
- The \$15/T price on the Technology Investment Fund will not act as a ceiling on the price of offsets
- For the capped emitters, compliance is a risk management issues and many of them will want to hedge their risk with a forward stream of offsets

What the Offsets System Needs to Deliver



What Is Involved In Value Creation?

- The Government will set up a Program Authority that will be responsible for the administration of the offsets system
- The Program Authority will authorize a series of protocols that will specify the types of projects that will be recognized in the offsets system
 - The protocol is the equivalent of an engineering drawing, it specifies all of the steps that must be followed in the project to successfully create offset credits
 - The PA may require that the protocol be validated which means that a third party attests that if your project follows the steps specified in the project the resulting credits will be real
- The next step is project implementation whereby you follow the steps laid out in the protocol and collect the information necessary to confirm that the appropriate steps have been taken

What Is Involved In Value Creation?

- Once the project has been implemented, a third party verifier needs to review the project and attest that the project followed the steps laid out in the protocol and that the resulting reductions should be awarded credits
- The Program Authority then issues the credits and they are registered in your account on the national registry and are available for sale
- The challenge in most agricultural projects is that they are small volume projects and as a result need to be aggregated into larger volumes to efficiently carry the costs of credit creation
- The agreements with aggregators need to be reviewed carefully

What Are The Markets For The Credits?

- In the short term the domestic market is likely to be short
- There will be bilateral deals and there is the expectation that we will see a and exchange
- There are questions about the extent to which we will see price discovery
- There is also a rapidly evolving secondary market
- In the future we anticipate seeing the development of a North American and potentially a global market with transparency total fungibility

Closing Thoughts

- The price of carbon will only go up over time although we may see some fluctuations in the short term
- Transparency and public confidence are critical to the process, if the public believes the system is bogus it will not survive
- As the effects of climate change become more apparent there will be a growing appreciation that we simply can't continue with business as usual
- Agriculture can be part of the solution but it will not be a simple or painless process



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