INSTITUTE FOR AGRICULTURE AND TRADE POLICY
COMMENTARY

About Jim Kleinschmit

Jim Kleinschmit directs IATP's Rural Communities program, which focuses on strengthening the link between rural economic policy and local, democratic decision-making. Jim grew up milking cows and learning about sustainable agriculture on his family's farm in Nebraska. Before joining IATP in 1995, he worked in the Baltic States and Russia where he promoted sustainable rural development.

About IATP

Institute for Agriculture and Trade Policy works locally and globally at the intersection of policy and practice to ensure fair and sustainable food, farm and trade systems. IATP is headquartered in Minneapolis, Minnesota with offices in Washington D.C. and Geneva.

Perspectives on U.S. agriculture and carbon offsets

MINNEAPOLIS, JUNE 14, 2010[1] — Agriculture has a real and significant role to play in combating climate change, both through reducing its own greenhouse gas emissions and through the ability of soils under certain farming systems to sequester carbon from the atmosphere. But these real opportunities for agriculture to help address global warming are not being optimized, and in fact, may be squandered. Under most U.S. climate bills under consideration, agriculture is included primarily as a source of offset credits that polluting industries could purchase.

While IATP has general concerns about the efficacy of any offset scheme in an intersectoral carbon trading system, we have some specific concerns about the impacts of offset markets for agriculture. These are discussed in greater detail in our writings on climate and agriculture (available at iatp.org/climate), but include: 1.) The potential food security and biodiversity risks due to an over-emphasis on carbon sequestration that does not consider agriculture's other important functions; 2.) The science and measurement tools simply aren't yet advanced enough to precisely quantify the amount of greenhouse gas emissions sequestered for a given agricultural practice over a period of time; 3.) Such markets are vulnerable to wide price swings and provide increased risk for all participants by confusing price signals for both farmers and emitters. Each of these concerns is summarized below, along with some recommendations for a better way to engage agriculture in the climate challenge.

Agriculture's multifunctional role

As we develop agriculture policies in the context of climate change, we must remember that agriculture is more than a mere mechanism for banking carbon. Agricultural systems are multifunctional. They protect the climate, biodiversity, soil, water and air and provide food, fiber and fuel. If we value agriculture's multifunctionality, then carbon markets may not be the right mechanism to achieve these varied goals, as by definition they only incentivize climate goals of reduced emissions and increased sequestration. Such a simplified "deliverable" may not align with other objectives—think genetically engineered eucalyptus tree plantings[2] in place of food crops. Considering the increased pressure already upon agriculture to feed a growing population in a changing climate, especially as the biggest climate impacts are expected to hit regions of the world already challenged by hunger, any market that promotes only the carbon sequestration function of agriculture is problematic.

Immaturity of current agricultural sequestration understanding and assessment

For offsets of any sort to be credible, it is generally agreed that they need to be measurable, verifiable, permanent, additional and not contribute to emissions elsewhere (commonly referred to as "leakage"). In each of these areas, there are real concerns about whether these conditions can be met by agriculture offsets. Scientific understanding of practices and systems that truly sequester soil carbon over the long term is still evolving. The problem is that policymakers are understandably eager to move forward, and aren't waiting for the results. In the American Clean Energy and Security Act (ACES), passed by the House of Representatives in 2009, certain farming practices eligible for offsets are already identified, including no- and reduced-tillage schemes, cover cropping, nitrogen fertilizer reductions, and biogas capture and combustion.[3] But with emerging research, some of these practices—such as annual crop no-till—are now being viewed as less promising in their sequestration potential than previously expected.

This inexactness is a problem in a market-based approach which exchanges dollars (or direct GHG emissions) for tons sequestered, especially if it locks farmers in contractually to practices that are later determined to result in lower sequestration tonnages. And it's not just a problem for the farmer, but for our overall climate goals—under such a scenario, polluting industries will potentially be able to cheaply avoid reducing their own emissions while promoting agricultural practices of questionable carbon sequestration benefit, likely resulting in much lower GHG emission reductions overall in both sectors.[4]

Agricultural offsets also are problematic from an additionality and permanency perspective, based in part on farming's multi-functional character. Additionality generally refers to whether or not a carbon sequestering activity would have occurred without the payment, but in agriculture determining additionality can be complicated. One such complication centers around the proposed "stacking" of benefits, whereby farmers may introduce perennial plants along waterways based on water quality or wildlife objectives, but carbon sequestration will also be a "product" of this farming practice. Is that considered "additional?" And how would one determine the carbon value versus the water quality benefit? If the plantings were paid for under a water quality program, does the farmer or landowner who agreed to implement these practices get the carbon credits, or do they belong to the government? Permanency is equally tricky for agriculture—contractually and physically. Working landscapes are able to sequester carbon, but it is still unclear how long, based on different farming practices, that carbon resides in the soil, or how long farmers will be willing or financially able to continue carbon-saving practices on the same fields.

Carbon market risks and vulnerabilities

Even if reliable verification mechanisms and clear accounting tools are developed for agricultural offsets, making the incentive for on-farm carbon practice improvements subject to the whims of a speculative market dominated by Wall Street banks would make it exceedingly difficult to ensure that offsets will be a long-term, reliable solution to climate change. An up-and-down carbon market stemming from offset credits could not only fail to generate emissions reductions (falling carbon offset prices would be poor incentives for farmers to switch to climate-friendly agriculture practices), but could also leave farmers—and our agriculture systems—even more vulnerable to speculative forces than they are already. While the lead Senate bill under consideration does include a number of important provisions to limit excessive speculation for the primary carbon market—including greater transparency and limits on who can trade—there are continued questions about how carbon will influence the secondary derivatives market where Wall Street speculators are expected to invest. Volatility in the carbon derivatives market would likely reverberate to the primary market—a problem even within a price floor and ceiling. If carbon derivatives are bundled with agriculture contracts into commodity index funds as expected, it could increase volatility for all commodities. It is hard to envision this having much of a positive impact either for farmers or the planet, but the potential profit to traders is clear. The total carbon derivatives market is estimated to reach $2 trillion in notional (face value of derivatives) contract value by 2017, with only a small fraction of that funding actually going directly to offset projects. For much more on this important topic see IATP's *Speculating on Carbon: The Next Toxic Asset.*

Moving forward effective agricultural climate policy

While many aspects of the climate solution are still being determined for other sectors, the answers for agriculture are increasingly clear. Climate-friendly agricultural systems are needed worldwide to help fight global warming and to ensure that we continue to have the food, fiber, energy and natural resources that we depend upon. We know that agriculture as a sector can both significantly reduce its emissions and be a major sink for greenhouse gases already in the atmosphere. Carbon sequestration, and a shift to low-input agricultural systems, can actually improve the resiliency of our soil, water systems and environment in a changing climate, while reducing our dependence upon fossil fuels. Focusing on these critical functions of agriculture leads us to the following principles for incorporating agriculture into climate policy:

1. ACKNOWLEDGE THAT AGRICULTURE IS A MULTIFUNCTIONAL ENTERPRISE. First and foremost it supplies our food, but it also provides animal feed, fiber, energy and other materials, helps manage ecosystems, including water, and is a vital part of our rural economy. Our agriculture system, farmers' cropping decisions and the nation's food security should not be compromised or subverted to the goals of industrial polluters or volatile carbon markets.

2. PROVIDE PREDICTABLE AND SUFFICIENT PAYMENTS TO FARMERS FOR CLIMATE-FRIENDLY PRACTICES. The long-term switch to farming systems that reduce GHG emissions more consistently and reliably that we need to address global warming will be better encouraged by predictable payments than by a volatile carbon offset program. Payments to farmers for climate-friendly agricultural practices should be set at the appropriate level that incentivizes participation without overwhelming other production and conservation priorities. This requires that payment levels are not set by a fluctuating market, but through a government-led process that is transparent and inclusive of farmers, land owners and other stakeholders. Such payments could be incorporated within existing U.S. farm programs such as the Conservation Stewardship Program and would constitute a climate-reduction program for agriculture.[5]

3. ENSURE FLEXIBILITY FOR FARMERS. The science around best agricultural practices for carbon reduction is still evolving, and we need to retain some flexibility for farmers to shift without penalty if different practices are discovered that would result in greater carbon reductions. At the same time, making a farmer liable for carbon emissions that are caused by natural disasters or other events outside of his or her control is likely to reduce farmer interest in participating in a carbon-reduction program. Programs for carbon-reduction practices must provide room for flexibility of practices that are intended to meet agreed outcomes.

4. HOLD AGRICULTURE RESPONSIBLE FOR ITS GHG EMISSIONS AND RECOGNIZE THE MITIGATION ROLE IT CAN PLAY. Agriculture, like every other sector, has a responsibility to reduce its GHG emissions. On many U.S. farms, however, emissions are difficult to measure and allocate, making comprehensive farm policy perhaps a better mechanism for emissions reductions than a cap. Concentrated animal feed operations (CAFOs), however, emit readily measurable amounts of GHGs, so may be better suited for regulatory approaches.

5. STRENGTHEN RURAL RESILIENCE. Rural residents already spend more on energy than their urban counterparts, and will be among those hardest hit by the effects of climate change. Policies must support rural communities' transitions to climate-friendly economies, and development of infrastructure to build more localized food and energy systems to help create jobs and strengthen the resilience of rural communities.

When we choose to circumvent real emissions reductions in exchange for offsets we hinder not only our ability to cool the planet, but also to reap the multitude of ecological, economic and social benefits that well-managed working landscapes can provide. And if recent debates are any indication, we risk pitting groups that share common interests, such as farmers and environmentalists, against one another, making it doubly difficult to meet our climate goals.

References

1. This summary draws heavily on previous writings of IATP, including "U.S. Climate Policy and Agriculture," by Julia Olmstead, http://www.iatp.org/iatp/publications.cfm?accountID=451&refID=106994

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