Carbon market basics

Sources: Jordan Shockley and Will Snell, UK agricultural economists

Carbon markets are a relatively new way for large corporations to offset their carbon footprint by paying agricultural producers for new or existing environmentally sound production practices that sequester or “trap” carbon in the ground. Typically, these large companies purchase carbon credits from a third-party aggregator who has paid the farmer for their production practices.

Environmentally beneficial production practices that can qualify for carbon credits include no-till/reduced tillage, cover crops, crop rotation and buffer strips. In Kentucky, no-till and cover crops may make the most sense for most producers.

Two kinds of carbon markets exist. One is a compliance market that limits greenhouse gas emissions for large companies. The second is a voluntary market where aggregators connect producers with companies needing to purchase carbon credits. Some companies will only purchase credits from producers who are implementing new practices while others will pay producers who have existing beneficial practices. Since Kentucky is the birthplace of no-till agriculture, the majority of our farmers are going to fall into the latter category.

With the market still in the developmental stages, much is still to be determined including firm pricing points. Carbon credit amounts will vary by farm based on how much carbon the ground can hold. Producers typically get between $15-$20 per ton of carbon sequestered. The aggregator determines the amount of carbon a farm can contain based on soil sampling and models. Many models exist to determine how much carbon a property can sequester with a production practice including one developed by the U.S. Department of Agriculture.

Jordan Shockley, a University of Kentucky agricultural economist, conducted a study on how much money Kentucky farmers could expect to make from the carbon market. He found that a 100-acre corn and soybean farmer in Hardin County could expect between $6-$21 per acre for no-till and cover crop practices.

Before enrolling in a carbon market program, make sure you ask questions, understand the contract’s terms, read the entire contract, including the fine print, and seek legal advice.

More information is available online through the UK Department of Agricultural Economics at <https://agecon.ca.uky.edu/carbon-markets-101> or by contacting (YOUR COUNTY) office of the UK Cooperative Extension Service.

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