Insights: Publications

The Need for Communication between Researchers and Policymakers for the Deployment of Bioengineered Carbon Capture and Sequestration Crops

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Bioengineered/genome-edited carbon capture and sequestration (BE/GEd-CCS) crops are being developed to mitigate climate change. This paper explores how technology, regulation, funding, and social implications, could shape the development and deployment of these crops. We conclude that some of the technological efforts to create BE/GEd-CCS crops may work. Still, stakeholders must agree on generally accepted methods of measuring how much carbon is captured in the soil and its value. The regulatory space for BE/GEd-CCS crops remains fluid until the first crops are reviewed. BE/GEd-CCS crops have received considerable initial funding and may benefit financially more from other federal programs and voluntary carbon markets. BE/GEd-CCS crops may continue perpetuating social equity concerns about agricultural biotechnology due to a lack of oversight. We argue that stakeholders need to pursue a multidisciplinary view of BE/GEd-CCS crops that draw in varying perspectives for effective development and deployment. Communication is needed between researchers and policymakers involved in either developing BE/GEd-CCS crops or developing voluntary carbon markets. We argue for the start of a conversation both across disciplines and between researchers and policymakers about the development and deployment of BE/GEd-CCS crops.

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