## Robotics, sensors, drones, and more: Agricultural technology enables farmers to go green without going broke

While always stewards of the land, [farmers have] faced a continuous squeeze over the decades with the real price of food declining, the price of labor increasing by 40 percent, and the price of agricultural inputs increasing by 15 percent since 2010. These forces allowed little flexibility in farmer margins to bear the cost and risk of switching to greener products and practices. But with food companies increasingly offering premiums and upfront risk capital, farmers are starting to see the calculus differently.

The big question remains: what technologies will unlock the ability for farmers to profitably capture the green premiums?

Farmers have been leveraging data from satellites, ground sensors, drones, advanced imaging, AI, and other sources for years to make informed decisions about their farming practices. Recently, advances in imaging and AI models have unlocked a whole new level of insight.

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Aigen, a new start-up in the space, zaps tiny 2-inch weeds with an electrical shock from a drone. Abundant Robotics and Harvest Croo have learned how to navigate, identify ripe fruit, and, hardest of all, pick the ripe crop without damaging it. As farmers face steeper labor and input costs, robots will be key for farmers to be able to implement precision agriculture profitably.

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