AgX

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The U.N. suggests sustainable food production systems are the key to tackling increasing world hunger. In Australia, a major food exporter, agricultural productivity growth has remained constant at an average of 1%p.a. for the past 40 years, with this growth largely arising from cutbacks in inputs rather than increasing output. Growing up on an Australian cattle station, I've seen farmers, already struggling with more severe and frequent droughts, hampered by the absence of data in decision-making, little to no technological innovation and non-existent digital connectivity. To address these issues, I founded AgX. Using nascent nano-satellite technology to ensure perfect connectivity and three smart devices, AgX will bring IoT to agriculture globally by providing a cheap, reliable platform for new technologies to achieve precision broad-acre, dairy and feedlot production. The three Smart devices that form the AgX platform are a livestock SmartTag, an in-ground SmartProbe and an image-recognition SmartDrone. The SmartTag is a livestock ear tag, primarily cattle, that delivers real-time biometrics including pulse, temperature, location and active RFID. The in-ground SmartProbe provides micro-climatic information on soil and pasture including dry-yield matter. It also forms an advanced mesh network and enables Bluetooth triangulation, which allows the SmartTag to function at extremely low cost. The SmartDrone employs local computer vision (object detection and classification), multispectral imaging, a spray system, and a suite of sensors (Lidar, optical flow, GPS, etc) for data collection and weed spraying, adapting to its surroundings. Together they ensure AgX will revolutionize agricultural technology.