

**Weed and farm management using robotics and computer vision – *Pauline Canteneur, FarmWise***

California-based robotics company FarmWise deploys automated mechanical weeders for vegetable farms to help them deal with dwindling field labor resources. Titan FT-35, FarmWise's third and most advanced robot, was released in April 2020. It distinguishes vegetable crops from weeds and removes weeds with mechanical tools down to a few centimeters of precision. Thanks to deep learning algorithms which are trained with thousands of crop images, the system detects plant species from one another, locate their stem and understand their 3D geometry in real-time while actuating robotic arms to uproot the weeds around the crops. The FarmWise automated weeder has been designed to cover 10-15 acres a day depending on soil conditions, weed and crop density. It is supervised by a human operator equipped with a tablet.