



CASE STUDY



Galvanizing supports sustainable farming

V&S Galvanizing's Columbus plant supported a farming project for Plenty Unlimited based in San Francisco, California. They use AI and robots to farm, which uses 99% less land and 95% less water compared with conventional farming.

The robotic base needed to be sustainable and durable. The V&S team discussed the design alongside the venting and draining requirements that were necessary to make sure that the robotic base housing would have the best quality appearance, coating durability and corrosion performance and be appropriate for the wet conditions that occur in indoor vertical farming.

The robotic design is attached to the base housing, with the robotic arm grabbing a row of seedlings and placing them into a hydroponic

planter. An even larger robot arm then flips the planter vertically and sends it to become one small section of a 20' tall wall of arugula, kale and beet leaves. A galvanized robotic base will last years to come without worrying about the durability of the coating system.

The company's farm is yielding enough produce to fill 720 acres of typical farmland, but they are doing it with just two acres of vertical farming. Plenty Unlimited says their farm produces 400 times more food per acre than the traditional farm. The automated robotic technology also means that besides the clear increase in food production, vegetation can be produced without the use of pesticides and without the risk of extreme weather. Out of season plants can be grown close to home without adding the carbon footprint of transport.

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