



Racks of Illumitex Eclipse LED grow lights glow at Green Spirit Farms.

## Green Spirit Farms Grows Happy Veggies under Illumitex LEDs

Just a few minutes' drive off Exit 1 in the idyllic lakeside village of New Buffalo, Michigan, hums a cutting-edge vertical farm that supplies fresh produce to Chicagoland customers hungry year 'round for locally grown greens and herbs.

Lucky school kids on a field trip to Green Spirit Farms are struck by the distinctive pink glow of the Illumitex Eclipse ES2s that provide the plants the energy they need to grow and flourish.

"The kids are wowed by the pink lights," says Milan Kluko, founder of Green Spirit Farms, a family operation where dads and sons and wives and cousins all work together to reduce the "foodprint" produce makes when traveling from farm to table.

After working with a wide variety of legacy lighting sources, and trying other manufacturers' LEDs, Milan Kluko and his son, Dan Kluko, selected Illumitex grow lights for their farm. Both possessing the measure-twice-cut-once mantra common to the scientifically minded, the pair conducted numerous rigorous trials before settling on Illumitex LED lights. "We did our homework," says Milan Kluko. "We put the lights through their paces."

"If you talked to me about LEDs a couple years ago, I would've told you that they didn't work. Illumitex LEDs changed my thinking. The amazing thing



Beautiful lettuce is grown at Green Spirit Farms.

about Illumitex LEDS is that we use less energy and attain a higher yield," says Dan Kluko. "Using less energy and attaining the same yield is great, but using less energy and achieving a significantly greater yield is a no-brainer."

The farm has seen as much as 30% greater yield under the Illumitex lights, says Milan Kluko, a benefit others are noting, as well.

As the Earth's population booms, and its resources dwindle, progressive thinkers across the globe are turning to contained environment agriculture. Among the many benefits of vertical farming is the fact that this type of cultivation generally uses 90% less water than conventional farming.

For example, traditional farming in California requires 7.5 gallons of water to grow a single head of lettuce. In Arizona, a whopping 25 gallons of water are used. Green Spirit Farms needs just .3 gallon of water to grow that same head of lettuce, says Milan Kluko. "Recycling is a big thing for us," he says, "so the water savings fits right in with our philosophy."

Vertical farming has significant timing advantages over traditional farming, too, says Milan Kluko. "Lettuce grown outside takes about 65 days, seed to harvest. We grow our lettuces in 21 days, and we replant on the same day we harvest."

The father-son team is proud that their produce travels no more than 75 miles from farm to belly. But they're not content with just the one farm — Green Spirit Farms has plans to supply the entire Midwest with its tasty and nutritious vegetables. A farm in Medina, Ohio, is under construction, as is another vertical farm in Detroit, with yet another Charleston, West Virginia.

"We can feed the world locally," said Milan Kluko. Indeed, Green Spirit Farms has no plans to stop at the Midwest. The company has been working on a location in Brooklyn as well as in Hawaii.

"Every one of our new farms will be 100% Illumitex lighting," says Milan Kluko. "We'll be the largest Illumitex farmer of vegetables in North America . . . and coming to a hemisphere near you."

## Case study job specifics

**Customer:** Green Spirit Farms

**Sector:** Horticulture

**Plant/Crop:** Various leafy greens

**Location:** New Buffalo, Michigan

**Solution:** Illumitex Eclipse ES2 LED grow lights

**Results:** Increased production, shorter grow cycles