



Infarm successfully demonstrates the potential of indoor-grown wheat

Leading vertical farming company Infarm and co-host of the Food Systems Pavilion at COP 27 has successfully produced wheat in an indoor farm, using no soil, no chemical pesticides and much less water compared to open field farming. Infarm is the first

vertical farming company to tackle staple crop production in a controlled environment. The first trials demonstrated exceptional results, allowing a projection of 11.7 Kg per m² yield per year. Further projected at scale, this is the equivalent of 117 tonnes per hectare per year - 26 times that of open-field farming yields. This production is independent of external climatic conditions and is thus genuinely climate resilient. This is an important milestone, as climate impacts worsen, in providing staple food in a controlled environment.

Guy Galonska, CTO and co-founder of Infarm says, “To continue to feed the world's growing population, we need to achieve higher crop yields which we have now proven to be possible for wheat through indoor, controlled environment agriculture. Our results are significant when compared to the average yield of outdoor wheat production, which is about 4.5 tonnes per hectare per year and heavily dependent on weather and seasons. We are confident that wheat can be grown successfully at scale indoors as a climate-resilient alternative. Our record yield could potentially be increased by a further 50 percent in the coming years using a combination of improved genetics, hardware, and optimised growth environments.”

Erez Galonska, CEO and co-founder of Infarm says, “Being able to grow wheat indoors is a milestone for Infarm and of significant importance for global food security, as wheat is a calorie-dense but resource-intensive crop that is a core component of diets worldwide. We started Infarm to find new ways of producing food to feed the world's growing population and the results show that we are a big step closer to achieving this goal.”

Wheat provides much of the global population with its daily energy requirements and is a significant source of protein, accounting for almost 40 percent of daily protein intake in some regions. Wheat is grown over a larger area than any other crop and due to a destabilised environment, the yield per hectare is expected to decline. To continue to feed the world's growing population it is necessary that we need to increase wheat yields which is now possible through indoor, controlled environment agriculture.