



Where I work Ana Saez García

In this picture, I'm measuring the spectrum and intensity of the light in a room where my company, Ekonoke, is growing hops hydroponically. At our facilities, near Madrid, we have three rooms equipped with sensors that control lighting, temperature, humidity, carbon dioxide levels and photosynthesis, among other factors. Once a week, I manually check the sensors to make sure that plant growth and density are on the right track.

Ekonoke's sensors also alert us to any problems – such as a leak in the irrigation system – before they affect the plants.

Hops, the flower of the plant *Humulus lupulus*, are what gives beer its distinctive flavour. Growing them hydroponically means using a minimal amount of substrate for the roots. We also use a recirculating irrigation system that recycles most of the water we use to grow the plants.

I studied ecological agriculture at Wageningen University & Research in the Netherlands and, in 2016, launched Ekonoke with development consultant Inés Sagrario. We grew leafy greens that we sold directly

to customers. In 2020, we were joined by people with experience in producing microgreens, and together we started testing indoor hydroponic hops.

This crop is in high demand worldwide but its quality and quantity are strongly affected by climate and other variants. Here, in our controlled indoor system, we can achieve four yields a year instead of one – and without using pesticides.

This year, we will move to a new indoor site of 1,000 square metres in Galicia, in the north of Spain, to start producing at commercial scale. We're setting up this facility in partnership with Hijos de Rivera, the Spanish company that launched the beer Estrella Galicia more than 100 years ago.

Our collaboration's first fruit – 'Respect!', a limited edition of a beer produced entirely with our hydroponically grown *Humulus* – came out in July. It's the world's first beer to be made exclusively with indoor hops.

Ana Saez García is a co-founder and the chief operations officer of Ekonoke in Madrid. **Interview by Patricia Maia Noronha.**

Photographed for *Nature* by
Guillermo Gutierrez Carrascal.