

Most food flavorings could be made with GMO microbes, sparing large amounts of farmland

In future, the majority of natural flavors could be produced from microscopic armies of microbes programmed to convert sugars into target molecules, rather than devoting vast swathes of agricultural land to growing plants that only contain tiny amounts of the components the food industry is interested in, predicts synthetic biology specialist Conagen.

Speaking to FoodNavigator-USA for our flavor trends special edition, Conagen VP R&D Casey Lippmeier said that when we think about how natural ingredients are going to be sustainably sourced in future, we may need to reassess current approaches.

“A flavor compound might comprise something like 0.001% by weight of the whole plant yet you’re still using land and water and energy to grow the whole plant, whereas if you make it by microbial fermentation [eg. Inserting DNA sequences into a microbe such as yeast, bacteria, fungi or algae to instruct it to produce any given flavor during a fermentation process with sugars as the feedstock] or bioconversion [where you start with a plant extract [and] convert that into a target molecule], you can significantly increase your efficiency and yield of production on a per acre base dramatically – plus you’re not using all the fertilizer, pesticides, water, and so on.

Read full, original article: [To boldly go... Conagen on the future of sustainable flavor production](#)