

Modern genetics could bring back mouth-watering strawberries

Think about the best strawberry you ever tasted. Sweet, with a flavor that's a greater-than-the-sum mix of overripe peach, underripe grape, burnt caramel, and a little tang to grab the inside of your cheeks.

Of course, not every strawberry tastes that good. Odds are you've been let down. Supermarket berries are bred for size, color, shelf-life, and disease-resistance. On the agronomical trip to market, strawberries have lost some of their flavor. But a new breed of...er...breeders wants to bring glory back to the strawberry, amping up classical breeding techniques with modern genetics.

First researchers figure out the chemical structure of the flavor they're looking for. Then they cross plants where the flavor chemical is strongly selected with blander plants. Sequence the DNA of both parents and the progeny, and you can start sleuthing. By cross-referencing the plants's physical appearances and genomes, the researcher can start building a database of which gene codes for which trait.

Neither Steve Knapp, the new director of UC Davis's six-decade-old Strawberry Breeding Program, nor Vance Whitaker, a breeder at the University of Florida's program, see much of a future for gene editing techniques in enhancing the flavor profile of future strawberry breeds. Besides the complications in marketing anything with a whiff of genetic engineering, flavor is too complicated to engineer in cut-and-paste fashion. "Plant breeding really operates on the entire genome. We don't have the luxury of working on a gene at a time," says Knapp. In other words, even though they might be able to isolate a gene responsible for a flavor, they wouldn't want to breed for it without pulling along all the related genes it blends with as it goes to protein to chemical to mouth-erupting flavor.

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis. Read full, original post: [The genetic quest to make strawberries taste great again](#)