



Earth911®
More Ideas, Less Waste

[How to Recycle](#)

[Where to Recycle](#)

[Food & Beverage](#) [How & Buy](#)

Reading time: 4 mins

The Juicy Details of Your Breakfast Drink



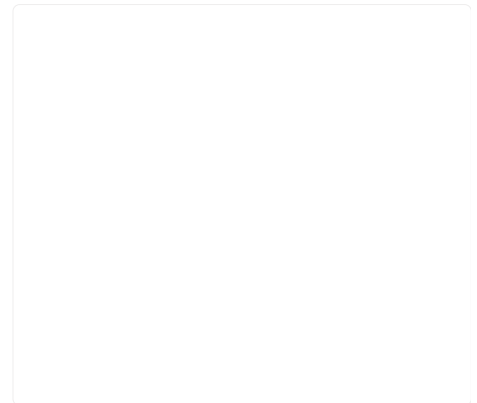
By [Gemma Alexander](#)

© MAY 20, 2021 [fruit juice](#)



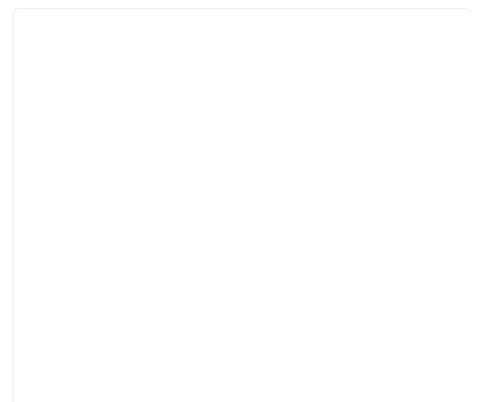
Aside from alcohol, few beverages are as divisive as fruit juice. Depending on who you talk to, juice is either a [superfood](#) or a sugar bomb that's [bad for us and the environment](#). What's the truth? We won't weigh in on nutrition, but the good news is that juice has a much [lower carbon footprint than milk](#). Unfortunately, fruit juice still has serious environmental and ethical impacts that we should all be working to minimize.

Fruit



Never miss an update!

[JOIN OUR LIST](#)



window width : 1263 px

Citrus juices, 90% of which are orange juice, make up 63% of [U.S. juice consumption](#). Apple juice comes in second, with grape and pineapple juices rounding out [the top four](#). Britain's [Ethical Consumer](#) reports that among unprocessed fruits, apples and oranges have the lowest carbon footprint, with mangoes and grapes the highest. Apple juice saves some energy by not requiring refrigeration until opened, while oranges have a slightly lower [agricultural footprint](#).

Travel distance and method both before and after processing makes a big difference. For example, oranges [delivered to New York City](#) from California generate less than half the emissions of Mexican oranges. But oranges [shipped to Holland](#) from Brazil have lower emissions than oranges trucked from Spain. This part of juice's life cycle is often hidden from consumers. Although most Florida oranges are made into juice, most orange juice [comes from Brazil](#), often blended with juice produced in the United States and [sold as an American product](#).

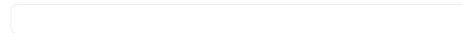
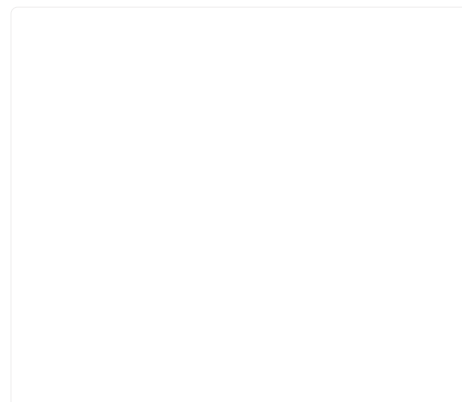
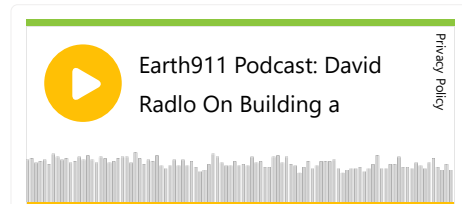
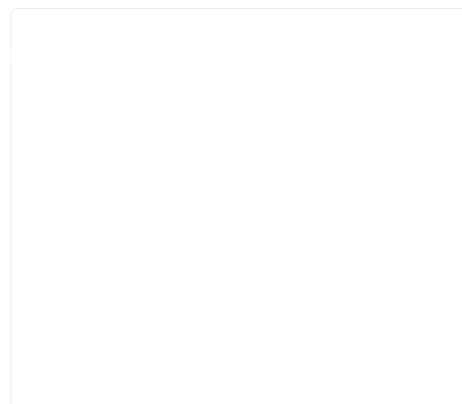
Farm

Agricultural production accounts for [half of the footprint](#) of orange juice, split roughly between the energy inputs for machinery and the chemical inputs of fertilizer and pesticides. Oranges also contribute to deforestation and displace other crops, like [shade-grown coffee](#).

Although the U.S. produces apples, most apple juice comes [from China](#). Regardless of origin, apple juice can contain [high arsenic levels](#), an artifact of pesticide use in both countries. In China, intensifying [apple production](#) has led to nitrate pollution and soil depletion.

Most available data relate to wine grapes, which are [different](#) from table and juice grapes. Table grapes (particularly imported) and apples routinely show up on the Environmental Working Group's "[Dirty Dozen](#)" of pesticide-contaminated produce items, although juice grapes tend to be [less chemical intensive](#) than wine or table grapes.

Pineapples are most likely to come from Costa Rica, where, despite that country's environmental reputation, [plantations are linked](#) to deforestation, wetland destruction, intensive agrochemical use, and soil erosion.





Pineapple plantation in Costa Rica

Farmer

Oxfam's investigation of [Brazilian fruit farms](#) found widespread, systemic poverty among workers, particularly women; poor overall working conditions; and inadequate protection against pesticides. In contrast, the expansion of apple production in China's Loess Plateau has helped to [reduce rural poverty](#) there. Grape juice is more likely grown in the U.S., where farmworkers [lack many protections](#) guaranteed to other workers. Pineapple plantations have a notorious history of [workers' rights abuses](#), and plantations in [Brazil and Cote d'Ivoire](#) are reported to use forced labor and child labor.

Form

[Processing is the second biggest](#) component of juice's footprint, at 27%. However, evidence is inconclusive regarding the differences among processing methods. An older study of Tropicana juice found the energy use in preparing and storing frozen concentrate was slightly more than the additional energy used to transport liquid juices. The only clear loser was reconstituted orange juice, which undergoes the energy-intensive concentration process while still being shipped in the heavier, bulkier liquid form.

[Packaging](#) accounts for [only 5% of the impact](#) of orange juice, with paperboard cartons less impactful than PET bottles. (Another study comparing [plastic and glass](#) found in favor of plastic.) While packaging waste was [only 3%](#) in the life cycle analysis that included disposal, it's still best to recycle. [Cartons](#), glass bottles, and [plastic bottles](#) are all recyclable,

depending on where you live.

Drinking Habits

If your goal is maximum sustainability, buy not-from-concentrate juice in cartons; buy local when possible; and look for certifications.

Certifications

[USDA Certified Organic](#)

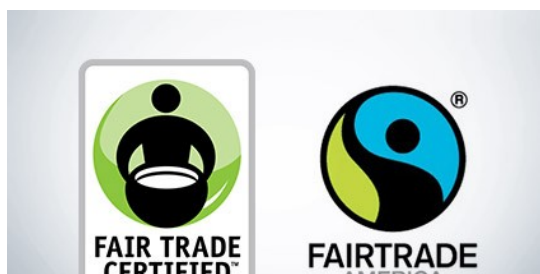
Buying organic can make a big difference – in one older study, [nearly 60%](#) of the agricultural impact of orange cultivation was fertilizer, and more [recent studies agree](#) that fertilizer continues to be a major contributor to farm impacts. Although organic certification does not include explicit worker protections, eliminating the use of agrochemicals does reduce workers' chemical exposure risk.



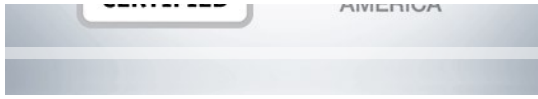
Source: ams.usda.gov

Fair Trade

Oranges are well-suited to production on family farms, but [processing is concentrated](#) in only a handful of companies. [Fairtrade could help](#) establish new, smaller processing facilities to enable better farming conditions. Unfortunately, [Fair Trade USA](#) and [Fairtrade America](#), the primary fair trade certification systems in North America, certify very few juices.



window width : 1263 px



Source: [Just-food.com](https://www.just-food.com)

[Rainforest Alliance](#)

Rainforest Alliance considers both environmental and worker well-being. After merging with UTZ in 2018, they developed a [new certification standard](#) that emphasizes context and progress rather than standards. They have been accused of [certifying unethical pineapple farms](#) (Rainforest Action [doesn't automatically decertify](#) farms when human rights abuses are detected) but they are one of the few certification systems actively working to [improve orange juice](#) and other fruit products.



Source: rainforest-alliance.org

The Last Drop

Because so many factors figure into the final footprint of a glass of juice it's impossible to definitively identify the greenest glass of juice. So if you really love your juice just the way you buy it now, feel free to focus your environmental energies where you know they'll [make the most difference](#).

advertising

[Edit](#)



Reading time: 4 mins

[Is Grocery Delivery Greener Than Going to the Store?](#)



By [Gemma Alexander](#)

Gemma Alexander has an M.S. in urban horticulture and a backyard filled with native

window width : 1263 px