

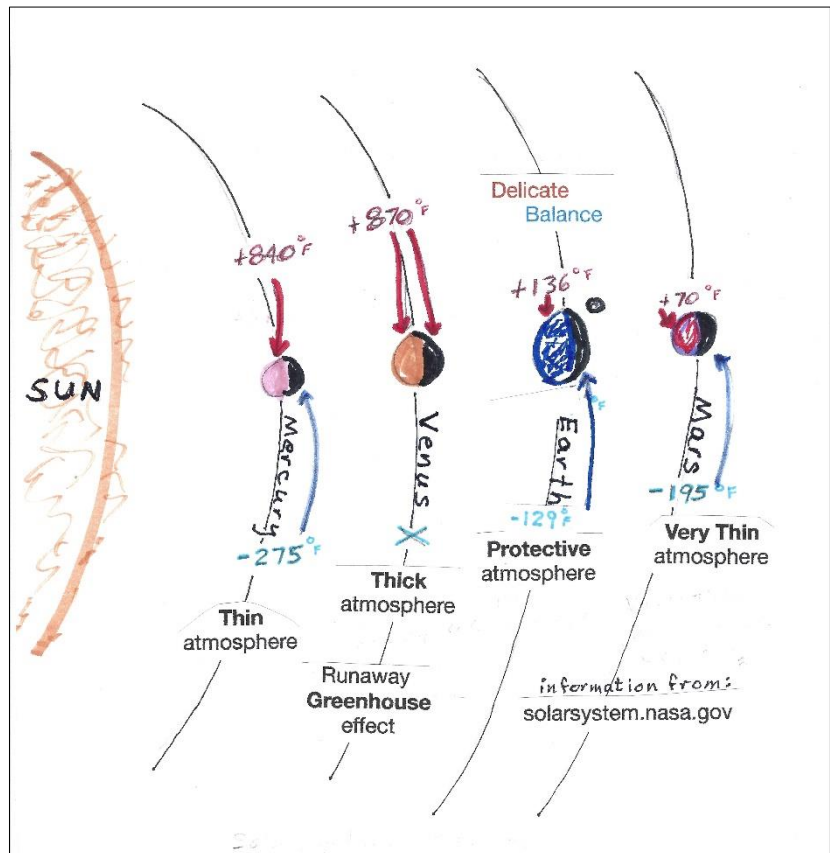


If Not Now, When?

As a beginner gardener, I took my inspiration from coffee-table books and my guidance from nursery catalogs. Not knowing any better, I followed common practices, from applying pesticides to choosing non-native plants. My rookie mistakes left a legacy of problems for the gardeners who came after me.

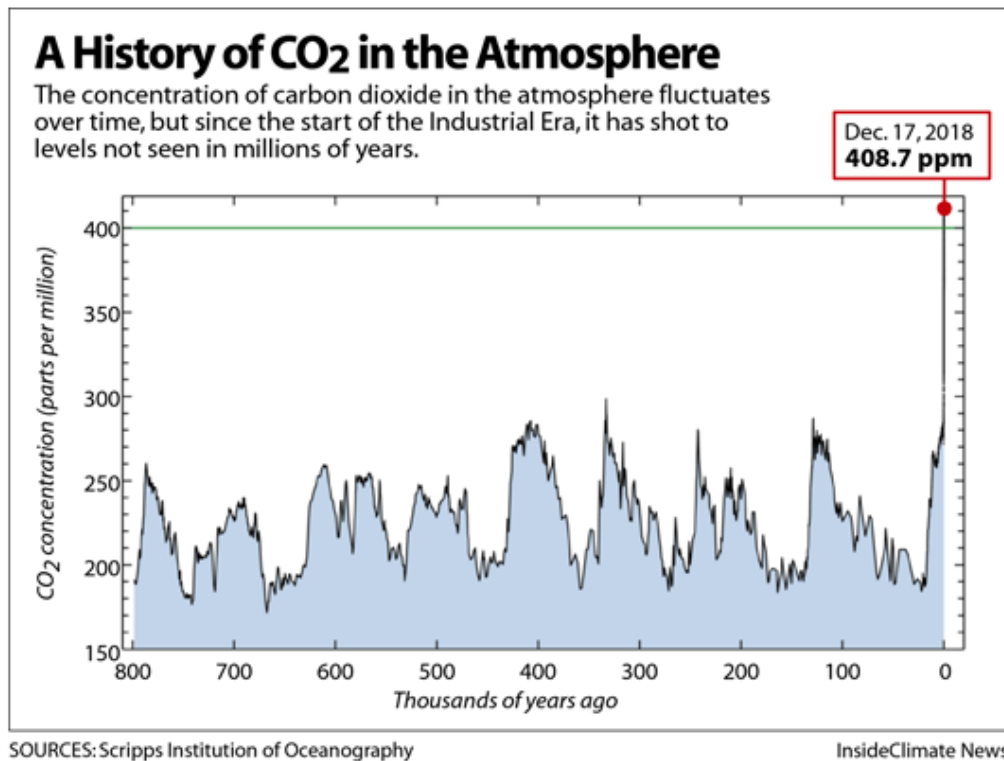
In a recent talk for our club, Maurice Adams, who spent many years in the energy field and has done considerable research, explained how our common garden, the third

rock from the sun, faces the most serious legacy of problems: the wholesale damage we have inflicted on it since the beginning of the Industrial Age. This one rock supports life in abundance because it, unlike the other planets, has a protective atmosphere that maintains a delicate balance between energy coming in from the sun and energy radiating back out. Mercury's thin atmosphere means nights are unimaginably cold; Venus's thick atmosphere traps the sun's heat at temperatures hot enough to melt lead, EVEN AT NIGHT, and Mars, like Mercury, is frozen.



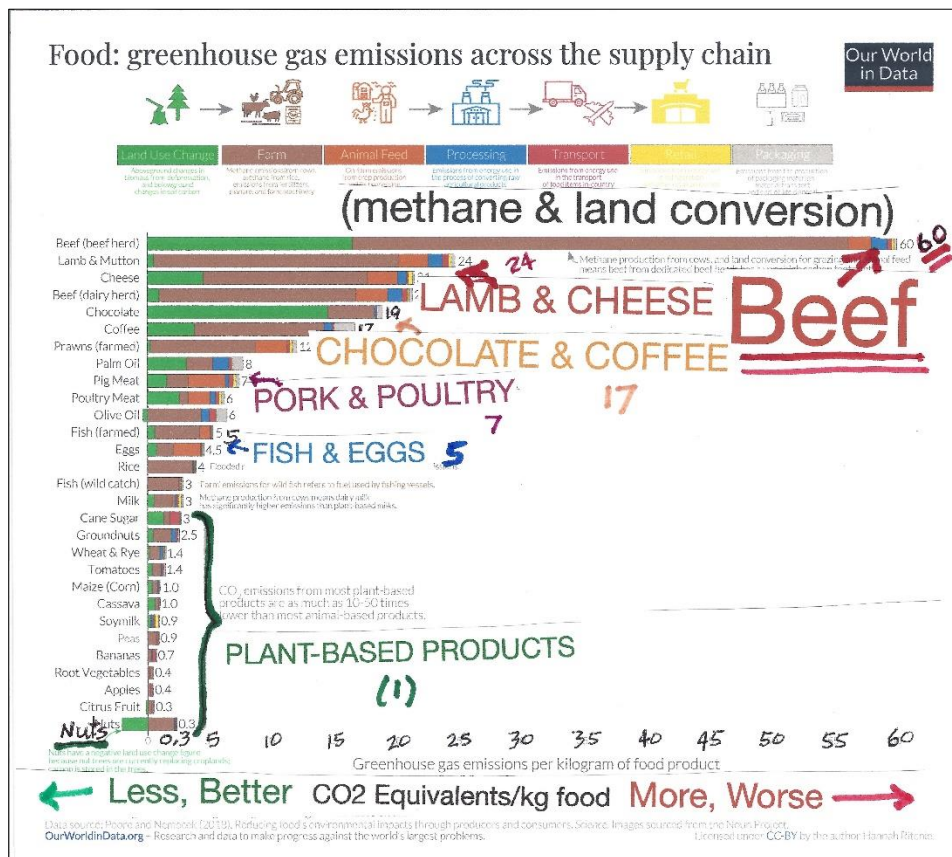
As this diagram shows, only our Earth, as Goldilocks would say, is “just right.”

Or at least it was. Our just-right atmosphere is defined by the level of carbon dioxide in the atmosphere. It can and does fluctuate somewhat, but for hundreds of thousands of years it held steady within a fairly narrow range. But not any more. The chart below says it all: in the last hundred years—roughly since the Industrial Era got rolling—CO₂ concentration has gone up, and up, and up, far faster and higher than could possibly be explained as a natural variation. As CO₂ density increases, it becomes more difficult for heat to radiate back out into space, and so the temperature rises. That’s the “greenhouse effect.” You’ve felt it if you walked into a greenhouse at a garden center. No big deal? OK, now think about how it felt when you opened the car door after a day at the beach.



Where does all that CO₂ come from?

- Burning fossil fuels, of course: to run everything from our cars, airplanes, trains and buses to lawn mowers and cruise ships; to heat our houses and offices; and to generate electricity in our power plants.
- Land use changes, including deforestation and farming processes that are ever more dependent on mechanization and petroleum-based fertilizers, and are geared toward a Western diet that has moved steadily away from plants to meat (especially beef, production of which can cause CO₂ emissions up to 50 times higher than plant-based products). Where does your diet fall on this chart?



- And all of these are magnified by the demands of an ever-growing population.

For as long as the earth has existed, the oceans have buffered fluctuations in temperature, absorbing excess heat, storing it, redistributing it. Unfortunately, the warmer the oceans become, the less extra heat they are able to absorb. And as they absorb heat they're also absorbing CO₂, which is making them too acidic for coral reefs and most fish. Not to mention changing patterns in ocean currents, which affect storm frequency and severity.

What can you do about it?

Recently an old friend and I were discussing the plight of our planet and how concerned we were. A bit later the conversation changed course, and she mentioned her hope to become a bicoastal resident when she retired. When I pointed out the CO₂ impact of frequent transcontinental flights, she balked. "I'm not going to stop traveling! I don't want to churn butter!" It's an all-too-common reaction: things have to change, as long as I, personally, don't have to change my behavior.

Well, nobody is asking anyone to churn butter. But we're not rookies any more, folks. The science is too solid, the effects too obvious, and the price too high to let us continue to pretend that we don't have to make some changes, even if some of them aren't very comfortable. But, hey, some people reacted as if the sky were falling when

plastic grocery bags were banned, and we've adjusted to that, more or less, haven't we? You can take steps today to help protect the only planet we've got:

- Educate yourself. Here are some excellent references on climate reality.
For CO2 animations (NOAA) : www.esrl.noaa.gov/gmd/ccgg/trends/ff.html
Climate Reality Project information: www.ClimateRealityProject.org
Earth Observatory: www.earthobservatory.nasa.gov
Solar System: www.solarsystem.nasa.gov/planets/earth/overview/
Current Climate Items: www.nytimes.com/section/climate
Climate Change, Energy, & the Environment: www.insideclimatenews.org
CT Energy: www.EnergizeCT.com
Greenhouse Gases (GHG): www.epa.gov/ghgemissions/overview-greenhouse-gases
- Speak up. Don't argue with skeptics, but do lay out the facts: CO₂ increased 40% in only a hundred years—NOT a natural fluctuation! The evidence is irrefutable.
- Make changes in your daily life: Eat more plant-based foods and less meat, and buy local whenever possible. Your waistline and your doctor will thank you.
- Reduce, Reuse, Recycle, and Compost.
- Insulate everywhere. Turn the heat down and the air conditioning up. While you're at it, plant some deciduous trees on the west side of your house as natural air conditioning. It worked for our ancestors and it will work for you. Native trees, like white oak and sugar maple, are always the best choice, since they're perfectly adapted to our state and support the most native insects.
- Drive less. Our nation's growth coincided with the age of the automobile and of the suburb. Suburbs and mass transit aren't well suited to each other, but if there's a bus or train option, give it a try. Carpool. Group errands into a single trip.

And finally, VOTE as if your planet's life depended on it, because it does. One ill-considered government policy can negate the best efforts of thousands of conscientious households. Put aside red and blue. The only color that matters is green.