Carbon dioxide concentrations are approaching 400 parts per million, higher than any found in at least 800,000 years. To commemorate the occasion, a Wall Street Journal op-ed has revived an old, repeatedly debunked argument about the benefits of CO2. The authors take the fact that plants need CO2 to grow, and argue that more is better, ignoring both common sense and overwhelming scientific evidence. Common sense says that it’s possible to have too much of a necessary thing; for example, vitamin D is necessary for our health, but too much can cause permanent heart and kidney damage. And science tells us that the negative impacts of global warming far outweigh any isolated benefits.

**The facts:**

In reality, the negative effects of excess carbon dioxide are devastating, with more than enough impacts to wipe out any growth benefit crops might experience. The warming effects of CO2 have been verified by independent scientific studies, professional organizations, and government investigations all over the world. This warming will present serious problems for agriculture.

Here are a few reasons why we won’t see an agricultural benefit from increased CO2:

- Extreme weather can devastate crop yields, and is linked to human-caused global warming despite Schmitt and Happer’s unsourced assertions to the contrary. Both droughts and storms take their toll. The recent U.S. drought caused maize yields to drop by 45 million tons, and is consistent with projections that extreme droughts will be more frequent in a warmer world.

- Carbon dioxide and warmth can spur the activity of weeds and pests as well as agricultural crops. Studies have shown that beetles eat more crops in a high-carbon environment (both through modern experiments and studying prehistoric warming events). Weed-killing herbicides have also been found to lose effectiveness at high CO2 levels.

- Plants need water, sunlight, nitrogen, and other nutrients to grow, in addition to carbon dioxide. Many studies have found nitrogen to be a limiting factor in plant growth, negating the temporary growth boost caused by increased CO2. Other studies show that high nighttime temperatures cause plants to use up energy reserves faster, reducing corn yields. Water availability concerns are also projected to increase in a warmer future.

Plants exhibit a growth boost under increased CO2 conditions only when all other factors have been controlled for, and the real world is nothing like these greenhouse conditions. We are effectively conducting a “real-world” experiment on our whole planet today, and have found food prices rising in response to higher temperatures and more extreme events. Adverse effects of global warming are so numerous that this kind of simplistic and repeatedly disproven argument has no place in our national debate.