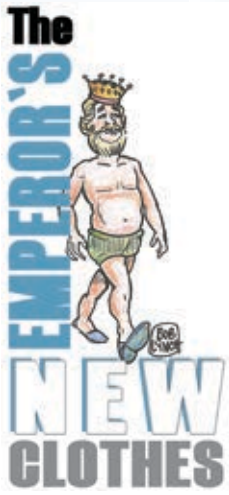

Is carbon dioxide a pollutant?

BY MARKUS I. BRYANT, GENERAL MANAGER

PART 51

Article 1, Section 8, of the U.S. Constitution says "The Congress shall have power to lay and collect taxes ..."

However, the fastest growing taxes are those imposed by the regulatory agencies under control of the president, especially the Environmental Protection Agency (EPA), aided and abetted by our federal courts. Government regulations add to the cost of business and living expenses. Therefore, they are actually an indirect tax on human activity because they cause more expenditure of money due to the regulation.

This regulatory taxing authority is rapidly expanding without congressional consent by various federal agencies using "Social Cost of Carbon" (SCC) calculations to justify new federal regulations, and especially by the EPA. (See my May 2014, Part 36 editorial for how SSC was established as a regulatory taxing method. Prior editorials can be found at **www.lmre.org** > About Us > *Country Living*.) These regulatory taxes are increasing because federal agencies are considering only the alleged costs of carbon dioxide (CO_2) and other greenhouse gas emissions and are not considering their benefits, even though presidential executive orders require them to do so. The EPA is, in effect, using SCC as a substitute value for a direct carbon tax that Congress has so far refused to enact. Consequently, the EPA is digging deeper into our wallets.

The Obama administration's EPA made an endangerment finding (see February 2012, part 15 editorial) that CO_2 and other greenhouse gases should be regulated as pollutants because it is convinced they contribute to global warming with a negative impact on human health and welfare. EPA's underlying assumption is that all greenhouse gas emission impacts are negative and therefore increase their SCC calculation of how much "damage" each ton of CO_2 emissions does to society. This alleged "damage" is subjective, based upon computer models, which as discussed in previous editorials, have not represented reality for almost 20 years. These models purport to calculate climate sensitivity to additional CO_2 in the atmosphere and how the resulting "global warming" will affect weather,

Table 1

Average percentage of biomass change with a 300 ppm atmospheric CO_2 increase and estimated monetary benefit of historical CO_2 increase from 318 ppm in 1961 to 392 ppm in 2011.

Crop	Pct. biomass change with additional 300 ppm CO_2	1961-2011 monetary benefit of CO_2
Rice, paddy	36.1	$579,013,089,273
Wheat	34.9	$274,751,908,146
Grapes	68.2	$270,993,488,618
Maize	24.1	$182,372,524,324
Soybeans	45.5	$148,757,417,756
Potatoes	31.3	$147,862,516,739
Vegetables fresh nes	41.1	$143,295,147,644
Tomatoes	35.9	$140,893,704,588
Sugar cane	34.0	$107,420,713,630
Apples	44.8	$98,329,393,797
Sugar beet	65.7	$69,247,223,819
Barley	35.4	$63,046,887,462
Bananas	44.8	$58,264,644,460
Yams	47.0	$56,163,446,226
Groundnuts, with shell	47.0	$51,076,843,461
Olives	35.2	$50,604,186,875
Oranges	54.9	$50,173,178,154
Beans, dry	61.7	$47,240,266,167
Mangoes, mangosteens, guavas	36.0	$40,731,776,757
Sweet potatoes	33.7	$39,889,080,598
Chillies and peppers, green	41.1	$39,813,008,532
Rapeseed	46.9	$38,121,172,234
Cabbages and other brassicas	39.3	$37,501,047,431
Carrots and turnips	77.8	$36,439,812,318
Cucumbers and gherkins	44.8	$33,698,222,461
Watermelons	41.5	$32,553,055,795
Pears	44.8	$31,577,067,767
Fruit fresh nes	72.3	$29,182,817,600
Fruit, tropical fresh nes	72.3	$28,837,991,342
Millet	44.3	$24,748,422,190
Eggplants (aubergines)	41.0	$22,794,746,004
Cassava	13.8	$21,850,017,436
Onions, dry	20.0	$20,793,394,925
Sorghum	19.9	$20,579,850,257
Tangerines, mandarins, clem.	29.5	$18,822,174,419
Coconuts	44.8	$17,949,253,896
Sunflower seed	36.5	$17,585,395,685
Plantains	44.8	$17,384,141,669
Lettuce and chicory	18.5	$15,029,691,577
Pumpkins, squash and gourds	41.5	$13,140,422,653
Oats	34.8	$12,615,396,815
Rye	38.0	$8,981,587,998
Peas, dry	29.2	$5,667,935,087
Other melons (inc. cantaloupes)	4.7	$2,477,799,109
Pineapples	5.0	$1,779,091,848
	Sum of all crops =	**$3,170,050,955,542**

Source: Center for the Study of Carbon Dioxide and Global Change © 2013, www.co2science.org

Source: http://www.plantsneedco2.org/ **These photos show the increased rate of plant growth at higher CO_2 levels.**

rising sea levels and economic activity, etc. However, is this negative-impacts-only assumption true?

Let's take a look at CO_2, since the EPA's Clean Power Plan is designed to regulate the entire U.S. electric industry to reduce CO_2 "pollution." CO_2 may be legally defined by the U.S. Supreme Court and EPA as a "pollutant," but it is certainly an odd one. CO_2 exists in a higher concentration in our lungs than in the air. It is essential to the process of making beer, bread and wine, and as discussed in my January 2012, Part 16 editorial, it is necessary for plant photosynthesis and is the key to all life on earth. Any complete medical or physiological textbook will discuss that CO_2 levels in the blood and lungs controls human respiration. The common treatment for hyperventilation is to have someone breathe into a paper bag to increase CO_2 levels in their body.

Look at the pictures at the top of the page, which show the increased rate of plant growth at higher CO_2 levels for the common house plant Devils Ivy, or Golden Pathos, on the left and for the Eldarica pine trees on the right. An interesting time lapse video of plant growth under two different CO_2 air concentrations titled "Seeing is Believing" can be seen using the QR code or the Web address in the righthand box on this page. Thousands of experiments have shown that adding CO_2 to the air increases the growth rate of nearly all plants and increases their ability to withstand drought due to lower water-loss rates at higher CO_2 levels. This is why commercial greenhouses use propane or natural gas CO_2 generators to raise CO_2 levels as high as 1,500 parts per million (ppm) in their greenhouses to achieve maximum growing potential for their plants, since it is an economic benefit to them.

Are increased CO_2 levels a positive benefit to agriculture in general? A 2013 paper, *The Positive Externalities of Carbon Dioxide: Estimating the Monetary Benefits of Rising Atmospheric CO_2 Concentrations on Global Food Production*, attempts to answer this question by applying the results of experiments involving the addition of 300 ppm of CO_2 to the 45 crops that supplied 95 percent of the total world food production from 1961-2011. The estimated increased yield by crop is shown in Table 1 using information from page nine of the report.

Next, the study estimates the past and future monetary benefit of rising CO_2 from 1961-2011 for the same 45 crops based upon 2004-2006 U.S. dollar values. The economic benefits exceeds $3.17 trillion dollars as shown in Table 1, with information taken from page 11 of the report. Finally, page 17 of the report shows an estimated $9.76 trillion financial benefit from 2012-2050 from rising atmosphere CO_2 concentrations. Does this mean all we need to increase agricultural production to feed a growing world population is to add CO_2 to the atmosphere? Probably not. Some recent studies show that water, nitrogen and other mineral levels need to be adjusted as well to support the increased plant growth rate and to maintain food nutrient quality.

Folks, a multitude of real scientific studies, rather than computer models, indicate that CO_2 has positive effects. The problem is that the Obama administration's SCC calculations neglects to include them due to political ideology. In future editorials, we will consider other positive social benefits of carbon dioxide and look more deeply into how the Obama administration is "gaming" SCC calculations to support its regulatory taxing agenda.

Scan the QR code below to view the video "Seeing is Believing" or find it at https://youtu.be/P2qVNK6zFgE