

Dedication

Sherwood B. Idso's career began at the U.S. Water Conservation Laboratory in June of 1967 as a research physicist. He had just come from the University of Minnesota, where he received his B.S. in physics, his M.S. in soil science with a minor in physics, and his Ph.D. in soil science with minors in meteorology and mechanical engineering.



In the early part of his career, Sherwood developed several methods for measuring and estimating (1) net, solar and thermal radiation fluxes, (2) near-surface water contents of bare and vegetated soils, and (3) daily evaporative water losses from bare and vegetated surfaces. He determined how water vapor and airborne particulates affect the solar and thermal radiation balances at the Earth's surface. The latter led to an interest in studying dust devils and also haboobs, the huge dust storms that roll in from the desert.



Sherwood and other USWCL colleagues developed remote sensing techniques for measuring several important plant and soil properties. This led to the use of infrared themometry and the concept of the crop water stress index, whereby foliage temperatures could be used to schedule irrigations.



Sherwood became interested in the debate regarding the degree to which Earth's temperature may rise due to the increasing atmospheric CO₂ concentration. He argued that any global warming would be much less than predicted by climate modelers. However, an elevated concentration of CO₂ also affects plant growth, and together with colleagues, Sherwood also conducted many experiments to determine the direct effects of elevated CO₂ on agricultural productivity and water use. Started in 1987, the experiment with orange trees is the longest ever conducted, and Sherwood continues to collaborate on it while in retirement.

Sherwood was one of the USWCL's most productive scientists, authoring more than 480 publications as part of his official duties and 88 more on his own time, including a pair of influential books on carbon dioxide and global change. His papers have been cited in the scientific literature in excess of 6500 times, which is more than an order of magnitude above the norm for all scientists.

Sherwood retired to a new career reviewing literature about CO₂ and writing editorials for the Center for the Study of Carbon Dioxide and Global Change, which are published weekly on the Web (www.co2science.org). We dedicate this 2001 Annual Research Report to him, and we wish him well in his new endeavor -- unfettered by reviews, approvals, and Form 115s!

