

Drought curbs plants, could boost climate change

By Randolph E. Schmid

Associated Press

WASHINGTON — Plant growth that had been spurred by global warming has reversed, despite temperatures that continue to rise.

Researchers say the change could affect food security and development of biofuels.

The amount of carbon taken up by growing plants increased from 1982 through 1999 as temperatures rose and the amount of carbon dioxide in the atmosphere increased.

But a new study in today's edi-

tion of the journal *Science* found a drought-related decline in such plant growth from 2000 to 2009, even though temperatures continued to climb.

As drought caused by warming reduces the land's ability to take up carbon, the result could be more carbon dioxide left in the atmosphere, and thus more warming, Maosheng Zhao of the University of Montana explained in a telephone interview.

"This is a pretty serious warning that warmer temperatures are not going to endlessly improve plant growth," co-author Steven W. Running, also of the

"This is a pretty serious warning that warmer temperatures are not going to endlessly improve plant growth."

— **Steven W. Running**, study co-author, of the University of Montana

University of Montana, said in a statement.

"We see this as a bit of a surprise, and potentially significant on a policy level because previous interpretations suggested global warming might actually help plant growth around the world," he said. Instead, he and Zhao

found a small but measurable decline of about 1%, compared to a 6% increase in the 1980s and '90s.

Their study, based on data collected by NASA satellites, found northerly areas increased plant growth, thanks to higher temperatures and longer growing season. But that was more than offset by

warming-associated drought in the Southern Hemisphere.

"This past decade's net decline in terrestrial productivity illustrates that a complex interplay between temperature, rainfall, cloudiness and carbon dioxide, probably in combination with other factors such as nutrients and land management, will determine future patterns and trends in productivity," said Diane Wickland of the Terrestrial Ecology research program at NASA.

The research was supported by NASA and the National Oceanic and Atmospheric Administration.