

Climate Change and Politics: Effect on a Changing Agricultural Landscape

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ARTICLE INFO

Received:  September 09, 2026

Published:  September 22, 2026

Citation: Mike Orzolek. Climate Change and Politics: Effect on a Changing Agricultural Landscape. Biomed J Sci & Tech Res 66(5)-2026. BJSTR. MS.ID.010397.

Opinion

In the last 20 years, climate change has affected every aspect of our every day activities, especially agriculture. Extremes in rainfall, temperature and wind speed have made it more difficult to produce predictable high yielding and quality crops worldwide. While many new crop varieties have been genetically altered through gene sequencing, improvements have occurred in both increased crop yield and quality, several problems still need to be resolved. Normal planting dates across the US have changed due to excessive moisture or suboptimum soil temperatures or both prior to the anticipated planting date for both small grains, corn and soybeans. During crop development, weather events will determine rate of plant growth and ultimate marketable yield. Specialty crop growers (fruit, vegetables and flowers) are especially fearful of frosts and hail events during the growing season. Either weather event can cause a reduction in crop quality or render the entire crop unmarketable. The other important factor in all crop production is soil health. Soil health is the continued capacity of soil to function as a vital, living ecosystem that sustains plants, animals, and humans. It represents the optimal balance of biological, physical, and chemical functions, allowing soil to manage water, cycle nutrients, and support biodiversity. Additional parameters required for a healthy soil are soil pH {5.8 to 6.8}, organic matter

content between 2 and 5% and optimum soil tilth {no compaction or large aggregates – clods}. Within recent years, the scientific community has conducted more research on soil microbes and their importance in root rhizospheres and plant development.

Ironically, most growers in the 1940's, planted many species of cover and rotational crops that enhanced and maintained soil microbes in the plant's rhizosphere based on early field research by land grant university applied researchers. Unfortunately, many growers have switched to no-till crop production in the last 20 years which affects the species and numbers of microbes found in the rhizosphere. Under the current administration in Washington, there has not been any effort to minimize climate change/global warming and the current Administration actually denies that there is a serious problem with climate change. Certainly their immigration policy has made it very difficult for fruit and vegetable growers to employ immigrant labor to plant, maintain and harvest their crops. By eliminating various OSHA and EPA regulations, safety on the farm and eliminating contaminants from drinking water, there will be more worker injured on farms and contaminated drinking water will become the norm not only for us but also future generations. Since we all consume at least one meal per day, food security and affordability should be the highest priority for this Administration.

ISSN: 2574-1241

DOI: [10.26717/BJSTR.2026.66.010397](https://doi.org/10.26717/BJSTR.2026.66.010397)

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