

# Southern Foresters' Observations of Climate Change: What, Where, and Implications for Continuing Education

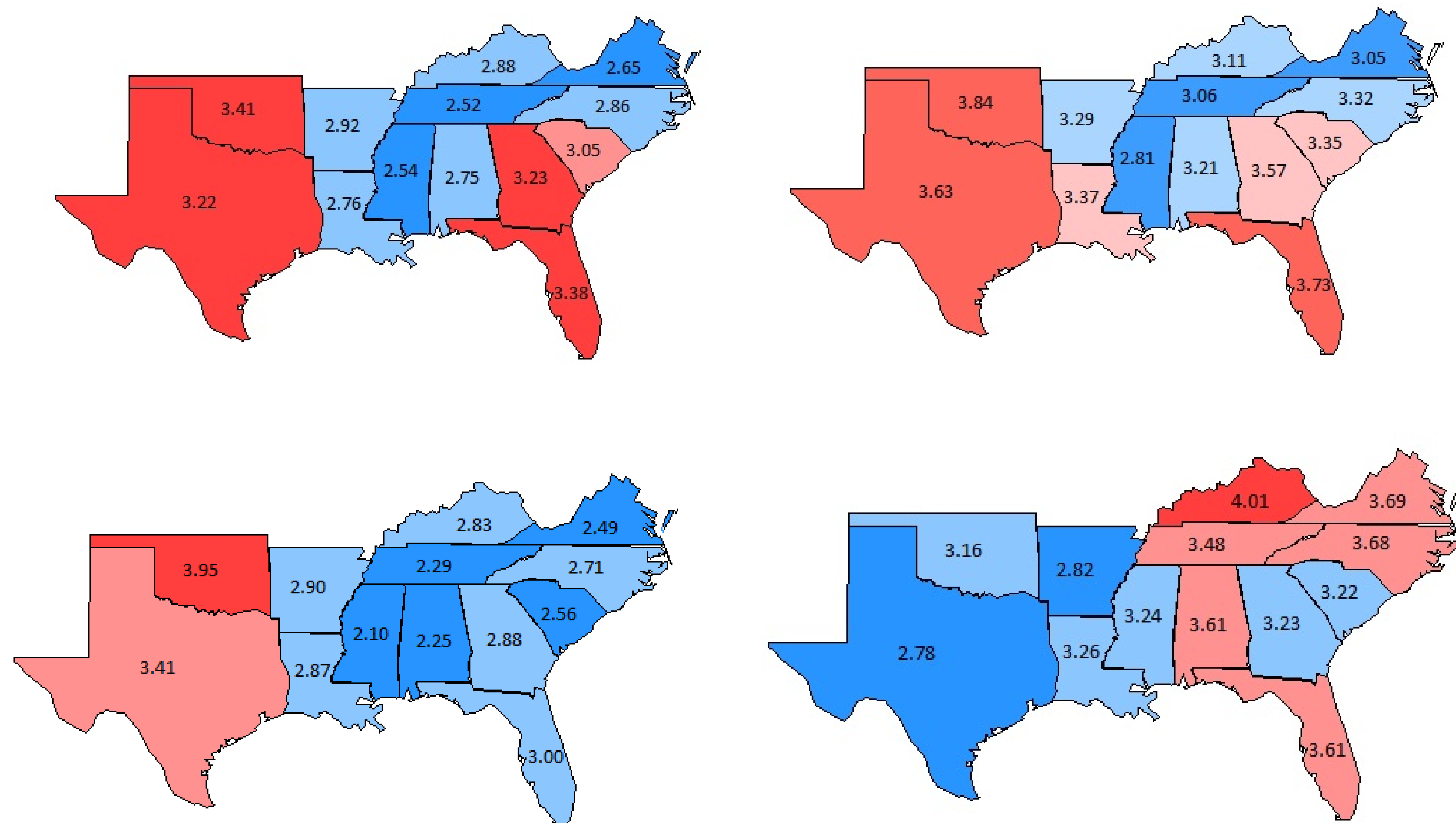
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## Summary

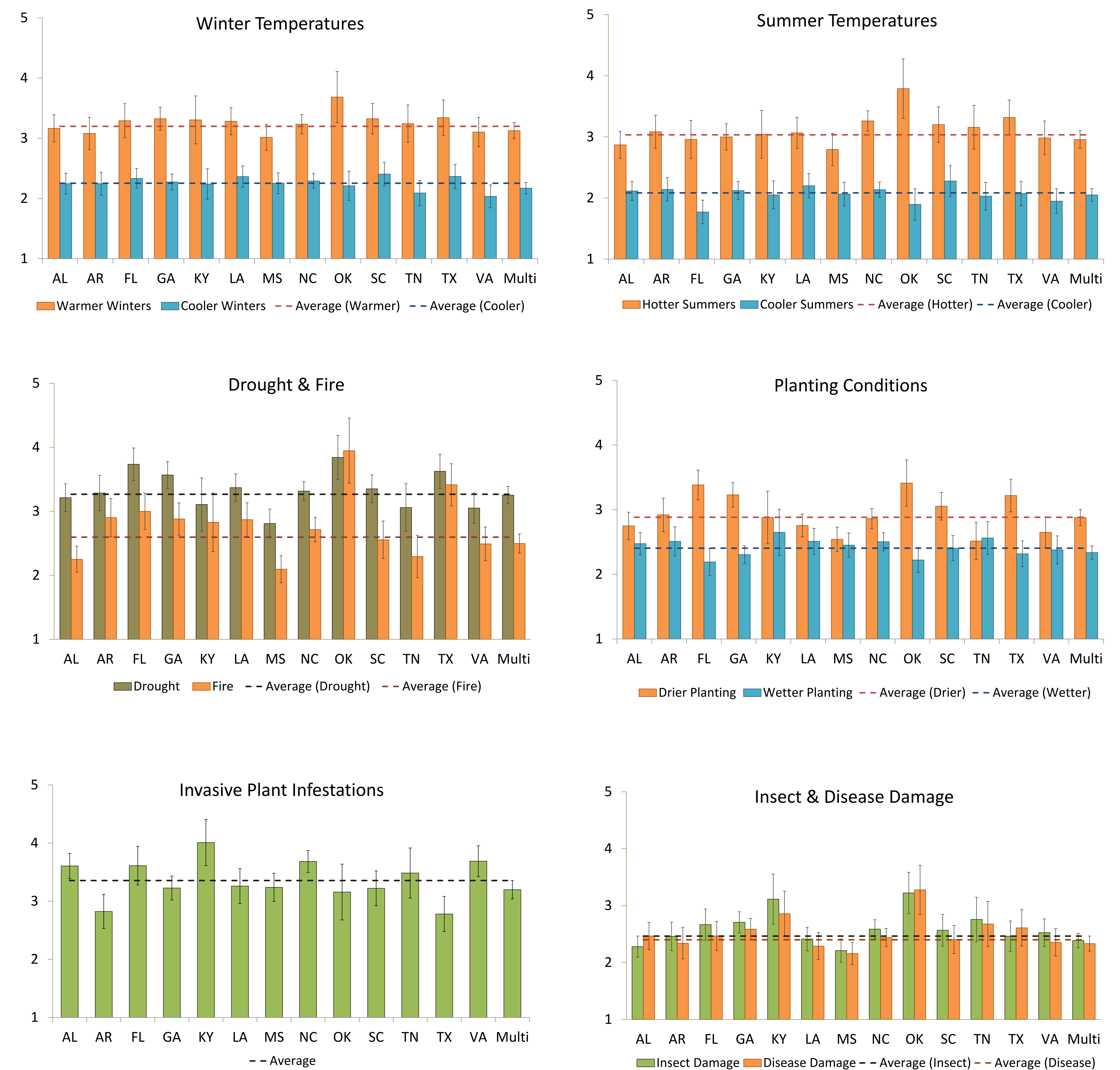
We surveyed professional foresters in the southern United States to identify how frequently they observe sixteen climate variables related to forest management and how those responses vary across the South. We found that in their lifetimes, southern foresters have noticed an overall change in climate, longer dry periods and/or drought conditions, greater frequency and/or severity of invasive plant infestations, warmer winters, and hotter summers with higher frequency than other variables. Observations of climatic change are generally observed with the highest frequency by foresters from Oklahoma, Florida, and Kentucky, and lowest frequency by foresters from Mississippi and Alabama. Observations of drier planting, drought, fire, and invasive plants exhibited positive spatial autocorrelation (i.e., states in closer proximity had more similar responses than states far away). These findings can inform Extension programming and facilitate development of materials tailored to address the observations and concerns of foresters on a state-by-state basis.

## Spatial Trends: Responses Positively Correlated across the South



Clockwise from the top left: **drier planting**, increased frequency/severity of dry periods or **drought** conditions, increased frequency/severity of **invasive plant infestations**, and increased frequency/severity of **fire** events. Responses are divided into quartiles: dark red is the uppermost quartile (most observations of climate change) and dark blue is the lowest quartile (fewest observations of climate change). Means responses of each state are shown on the maps.

## Top Observations of Climate Change & Its Impacts



Means and confidence intervals of single-state and multi-state southern foresters' observations of climate change and its impacts. Responses were measured on a 5-point Likert scale ranging from never (1) to very frequently (5).