

## LUBBOCK/HIGH PLAINS

The linkages between agriculture and climate are pronounced and critical. Current global warming models indicate that crop yields in warm, low-latitude regions of the southern United States like the Texas panhandle are likely to decline over the next century.

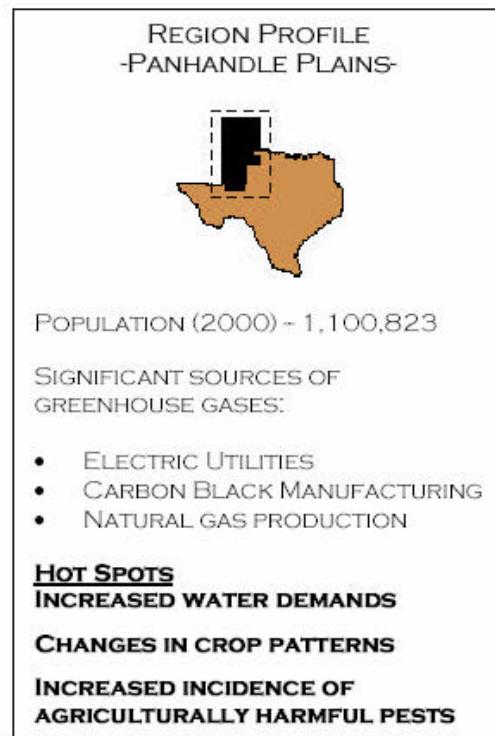
Agricultural systems are very sensitive to extreme climatic events such as wind storms, droughts, and to seasonal variability such as changing rainfall patterns. **Global warming could accelerate the frequency and magnitude of extreme weather events and could change seasonal patterns in unfavorable ways for the Texas high plains region.**

Increases in rainfall intensity pose a threat to agriculture and the environment because heavy rainfall is primarily responsible for soil erosion, leaching of agricultural chemicals, and run-off that carries livestock waste and nutrients into water bodies. **Global warming is also expected to have a number of negative indirect effects on agricultural systems, such as incidence and distribution of pests and disease and increased rates of soil degradation.**

### WATER

The availability of freshwater to meet the demands of an increasingly affluent population while sustaining a healthy environment has emerged as one of the Texas' primary resource issues.

The Texas panhandle accounts for 70 percent of the groundwater withdrawal



of the entire state, predominantly for agriculture. Texas panhandle concerns about water for municipal and agricultural use revolve around the capacity of the Ogallala Aquifer. **As a finite resource with little recharge, the Ogallala is expected to be drawn down at a faster pace with an increased demand for irrigation under global warming.**