

# State Drought Losses Have Significant Impact on Overall Economy

Much of the Southern United States has experienced drought conditions over the past twelve months. The situation is especially severe in Texas, where farmers and ranchers face substantial income deficits. Texas AgriLife Extension Economists estimate the 2011 drought has led to \$5.2 billion in agricultural losses (Fannin, 2011), making it the most costly on record. Direct damages by commodity include \$2.06 billion for livestock, \$750 million for hay, \$1.8 billion for cotton, \$327 million for corn, \$243 million for wheat, and \$63 million for sorghum.

The Texas High Plains region constitutes a significant portion of state agricultural revenues. It has been severely impacted by recent low rainfall conditions. For example, regional sorghum acreage typically accounts for around 20% of state production. In 2011, Texas Panhandle sorghum suffered an estimated \$57 million in total losses. This deficit accounts for abandoned acres as well as projected lower yields from harvested acres. Regional wheat encompasses 37% of state production, and experienced approximately \$147 million in 2011 losses. Finally, the Texas Panhandle normally accounts for 40% of state corn production. Estimated losses for this commodity exceed \$307 million (Welch, 2011). Regional cattle and cotton revenues have also faced substantial shortages.

While both state and local production deficits are significant, their ripple effect on the Texas economy is even more severe. A recent study by Extension economist Dr. Bridget Guerrero used a regional economic impact model, IMPLAN, to examine the effect of agricultural drought on the Texas Economy. IMPLAN accounts for the direct impacts of lost producer income, and then determines how these losses lead to indirect and induced effects from decreased local expenditures (referred to as the “multiplier effects”) (Minnesota IMPLAN Group, 2009). For example, if a farmer’s cotton acreage fails, he/she will not harvest the crop (direct effect). As a result, the cotton gin will not run as many trucks (indirect effect). Finally, the truck driver that was not hired can’t spend money at the local grocery store (induced effect).

Study results showed the projected financial impact of a \$5.2 billion state agricultural production loss was an estimated \$8.7 billion. This number includes the drought’s effect on various businesses ranging from fertilizer dealers, grain elevators, cattle processing plants, and even grocery stores. These negative results on both state and regional economies will continue to increase as long as low moisture conditions persist. Recent projections indicate that 2012 could result in similar weather patterns as 2011, with the potential for even greater rainfall shortages.



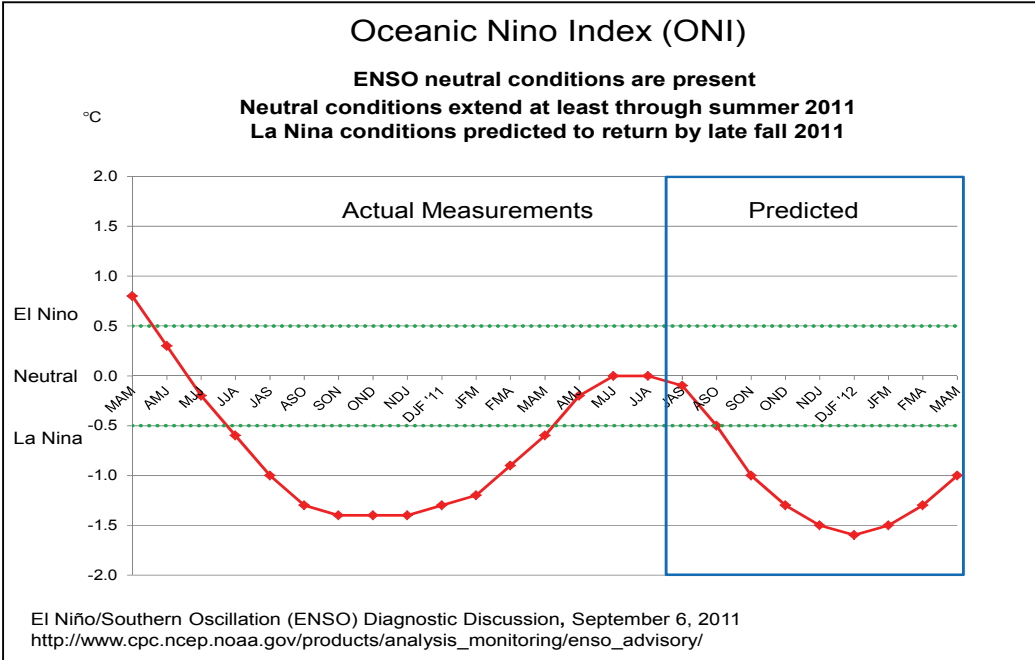
**“It is important to realize that drought losses extend far beyond the farm gate”**

**Dr. Steve Amosson,  
Texas AgriLife  
Extension Economist**



According to Impact Weather meteorologist Fred Schmude, the intense 2011 drought was due primarily to a very strong La Niña condition over the eastern Pacific. La Niñas typically result in weaker than normal sub-tropical storm seasons that limit rain producing weather disturbances affecting Texas. For 2011 that phenomena started in February and intensified through the spring. Unfortunately, the main components that caused last year’s low rainfall conditions could return in 2012, due primarily from another condition called the Pacific Decadal Oscillation (PDO). The PDO is a large scale weather system over the northern Pacific Ocean which has alternating periods of cold and warm cycles and lasts many years. When the PDO is in its cold phase, La Niñas are more frequent and intense. In 2012 the PDO will shift toward negative, signaling a redeveloping La Niña later this fall as colder than normal water over the eastern Pacific Ocean is funneled southward into the Tropical Pacific. As a result, the current drought could persist through next spring over most of Texas. Producers will face many tough decisions concerning crop mixes, acreages, and insurance selection over the next few months.

**Figure 1. 2011 Actual Versus 2012 Projected La Nina Conditions**



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