Around Dakota Ag

Current U.S. drought cycle seems to be a long-term one

By **P.J. GRIEKSPOOR**

DROUGHT is a normal climate cycle in the Great Plains. The current one is typical of the patterns that have been seen in the '30s, the ' 50s, the ' 80s and the turn of the century from 1999 to 2006, says meteorologist Aaron Johnson, who works out of the Dodge City, Kan., office of the National Weather Service.

The impact of the current drought has been intense, especially in Texas, Oklahoma, New Mexico and southern Kansas, with agricultural damage estimated at more than $9 billion as of December.

Unfortunately, Johnson says, all indications point to a continuation of a drought pattern, at least for another several months and possibly for another five years.

That's not encouraging news to farmers in Texas, Oklahoma and Kansas, where wildfire and drought have left little cover on millions of acres of soil vulnerable to wind erosion.

Already, blowing topsoil caused the closure of Interstate 70 in western Kansas more than once during the summer of 2011. Farmers in Oklahoma and Texas have also seen numerous days of blowing dirt and a giant, 1930s-style storm rolled over Lubbock, Texas, on Oct. 17.

Key Points

- Long-term U.S. weather pattern indicates continued drought.
- Regional dust storms are likely; big events are less likely.
- The long-term drought may have some wet spots.

Johnson says he experienced a similar storm in 2004, when an approaching thunderstorm caused strong winds that picked up huge amounts of topsoil in eastern Colorado, creating a massive storm that rolled over Goodland on May 29.

"It was frightening," he says. "It was horizon to horizon, with visibility of maybe a meter. With most thunderstorms or tornadoes, you can see either side of the storm. This was just massive."

Johnson says there are factors in play that reduce the chances of such storms becoming commonplace. "One thing that cannot be overemphasized is that we have improved our farming methods dramatically," he says. "We don't turn and pulverize the soil. We do keep crop residue, and there are hundreds of thousands of acres of no-till as well as CRP [Conservation Reserve Program] grass."

Along with that is the chance that there will be winter moisture. Kansas and the driest areas of Texas and Oklahoma have seen some winter moisture, but all of Texas, most of Oklahoma and a third of Kansas are still in moderate to exceptional drought.

"In reality, the recent rains have helped, but not enough," Johnson says. "We are going to have to see April, May and June rains to make a difference."

The winter rains, however, do hold out hope for an early green-up of grasslands in the spring and improve the odds of farmers being able to plant a forage crop.

But they do not change the reality that far too many acres of soil are bare and vulnerable in the windy winter months.

"My expectation would be that we will see some pretty significant regional dust storms through the winter," he says. "I think that multistate storms like those of the 1930s are less likely, simply because we have good farming practices in place over a lot of the area that was vulnerable then."

Pattern points to long drought

The news for the likelihood of continued drought in summer 2012 is not encouraging, however. Major climate patterns point to the likelihood that summer in the Great Plains will be hot and dry.

"It goes way beyond the El Niño, La Niña phenomenon that gets so much attention," he says. "The longer-term major patterns tend to be even bigger drivers."

One of those patterns, the Pacific Decadal Oscillation, is a long-term event (10 to 20 years) that steers the ship of oceanic/atmospheric activity.

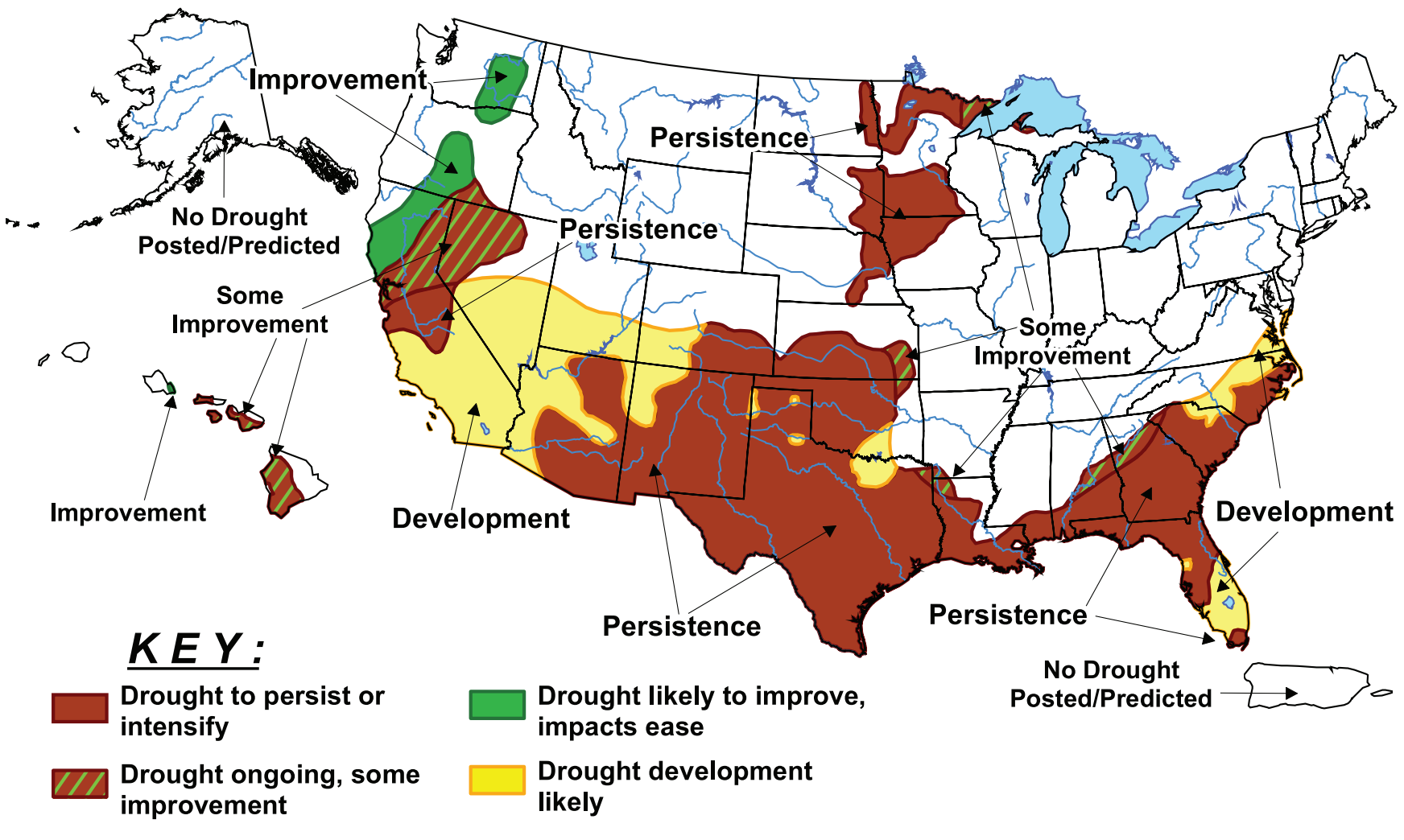
Another is the North Atlantic Oscillation, which shifts between positive and negative phases about every two weeks. The long-term North Atlantic Multi-Decadal Oscillation is a 10- to 20-year pattern that looks at the average of all NAO data.

The mechanics of those patterns is complex, and Johnson says there is more we don't know about how they work than there are things we do know.

But a comparison of those phases and historic drought in the Great Plains provides a clear correlation that points to the likelihood of a warm, dry winter and another summer of drought.

The current pattern favors a positive North Atlantic pattern coupled with cooler Pacific pattern. This is the same pattern that existed in the 1930s and the 1950s, Johnson says. It is important to realize, however, that there are variations in shorter-term weather patterns even in a prolonged period that is dry overall.

U.S. Seasonal Drought Outlook: Valid for Jan. 19 – April 30, 2012



SOURCE: NOAA