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It Sure Get's Dark Early

AGRI-VIEWS

by Chuck Otte, Geary County Extension Agent

One evening earlier this week I was leaving work shortly after 5 p.m. and I thought to myself, boy it seems to be getting dark awfully early! But then it occurred to me that in the first days of December we do have the earliest sunset that we will experience all year. I think many folks feel that sunrise and sunset get equally shorter as we approach the winter solstice and then instantly both start to go the other direction in an equal fashion.

Well, that's not quite the way it happens. As you may remember from a science class some time in your life, the earth's axis is tilted 23.5 degrees and it slowly rotates around. This is what brings us the changing seasons as we tilt more directly toward the sun or away from the sun. It also explains why seasons south of the equator are opposite ours north of the equator. We are about to pass from autumn into winter and in Australia they are about to pass from spring into summer. This tilt also creates a situation where sunrise and sunset don't react exactly the same.

At our location of latitude and longitude the earliest sunsets occur from December 1 through December 13. This occurs at 5:05 p.m. So as I was driving home that recent evening, it seemed to be getting dark early because the sun had in fact already set. But starting on December 14th, sunset starts to occur later, 5:06 p.m. on the 14th to be precise. By New Year's Eve sunset will be ten minutes later than it is tonight. Not a big change, but it's a change.

Sunrise however is a different situation. Once again, because of that tilt, sunrise is going to occur later and later until January 9th when it finally starts to occur earlier. Sunrise tomorrow morning (Sunday the 10th) will be at 7:34 a.m. Sunrise is at it's latest from January 2nd to the 8th when it occurs at 7:47 a.m. But when you figure the total amount of daylight, the shortest day of the year does occur on the winter solstice. This year, the date of the winter solstice, which is when the sun oh so slowly starts working it's way "back north" will occur at 10:22:32 central standard time on December 21st.

The same scenario occurs as we approach the summer solstice. Even though the summer solstice is on June 21st, the earliest sunrise (6:01 a.m. central daylight time) occurs from June 9th through the 20th at which time it starts to get later again. The latest sunset comes a little after that. The sun sets at 8:57 p.m. from June 21st through July 4th and then starts occurring earlier. But again, the longest period of daylight, perhaps by just a few seconds, occurs on the summer solstice. Coincidentally, the days with exactly 12 hours of daylight, do not occur on the acutal equinox days. In the spring it's a few days before the vernal equinox and in the fall it's a few days after the autumnal equinox.

The angle of the sun and the amount of daylight we receive naturally impacts out climate. Interestingly there is a lag between the longest and shortest days of the year and the hottest and coldest days of the year. A lot of this is simply due to the extended period around each solstice when the amount of daylight and the angle of the sun, just don't change all that much. But it also has a lot to do with the buffering affect of the land and how long it takes to start heating or cooling all that soil. Locally, the hottest day of the year (since 1950), based on average daily temperature, is July 18th. The coldest day of the year is January 4th.

So, yes, it does get dark early in the evening. But that will start changing soon. Sunrise however will be later and later for about another month yet though!

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