THE
ATMOSPHERICRESERVOIR
Examining the Atmosphere and Atmospheric Resource Management

"It's Harvest Season"

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Photo Credit: Sheila Fryer

The season of autumn has been defined many ways over the centuries. From an astronomical viewpoint, autumn begins on the autumnal equinox and lasts until the winter solstice. Meteorological autumn lasts from September 1st through November 30th of each year. Before the 16th Century, when most people were part of an agrarian society, autumn was known simply as Harvest season. The Germanic origin of the word harvest is Herbst, which modern day Germans associate with the season of autumn. Over time, we've come to know harvest almost exclusively as the reaping of crops and less association is actually placed on the precise time of year.

North Americans often use the word fall as a substitute or alternative to autumn. This context has Germanic origins and was actually used in 16th Century Britain before catching on in North America. During the season, temperatures "fall" from their summer highs, leaves "fall" from trees, and the amount of daylight dwindles as our clocks "fall back" for daylight savings time.

Oftentimes it's thought that wind or cold temperatures are responsible for falling leaves in autumn. Peter Raven, botanist and president of the Missouri Botanical Garden was interviewed by National Public Radio (NPR) and stated that trees actually "throw their leaves off." This process involves chemical messages that are sent to the leaves from the tree triggering the formation of abscission cells. These cells literally act to cut off the leaf's stem by gathering where the stem meets the branch. The decrease in sunlight in autumn reduces chlorophyll production in leaves and it's thought that this can contribute to the abscission process. So leaves are ready to fall from trees through abscission and then wind just gives them an extra nudge.

Other interesting occurrences in autumn are the Harvest and Hunter's Moons. The Harvest Moon is simply the full moon that occurs closest to the autumnal equinox. One can imagine the Harvest Moon being used by farmers centuries ago to work in their fields at night, something that even with the invention of the light bulb is still utilized today. What makes the Harvest Moon unique, though, is that the moon's orbital path or ecliptic is at its narrowest angle and allows for the shortest time between moonrises. This provided farmers with moonlight shortly after sunset, so they could keep working into the night. The Hunter's Moon is the next full moon following the Harvest Moon and has Native American origins. Before winter, Native Americans would gather essential food and supplies to sustain themselves for the upcoming cold season. Since many animals are nocturnal, the Hunter's Moon would aid the hunters in finding their prey. Modern day hunters still use the Hunter's Moon to their benefit. Fields are usually cleared to stubble after harvest, and that, in conjunction with the light from a full moon, gives hunters an advantage.

So whatever definition of autumn is chosen for the season, this September 22 you can officially celebrate the autumnal equinox, beginning of autumn and fall, and even though harvest will already be in progress, harvest season.

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