

BRIEF HISTORY OF RAINFALL MEASUREMENT

HOW LONG HAVE PEOPLE BEEN TRACKING PRECIPITATION?

In his book *Meteorologica*, Aristotle (340BC) mentioned topics such as clouds, mist, rain, snow, etc, but not the measurement of precipitation. Measuring rain and keeping records of it was apparently still far off in the future.

The earliest quantitative device for measuring rainfall seems to be credited to a king in Korea called King Sejong who lived from 1397 to 1450. One of his goals as king was to make his people literate, so not only did he invent a rain gauge, but more importantly, he invented a phonetic alphabet for the Korean language as distinct from the Chinese characters widely in use in his time and movable type for that alphabet.

He decided that instead of digging into the soil to check for moisture, it would be better to have a standardized container about 30cm in depth and 14cm in diameter that stood on a pillar to measure the rainfall. These containers were to help villagers determine their potential harvest and to give King Sejong a better idea of how much the farmers should be taxed! So, these standard containers were distributed to each village. The rain gauge was invented in the fourth month of 1441, according to records.

The tipping bucket rain gauge was invented by Christopher Wren in Europe around 1661 and used the standard of weight, or sometimes volume, of the liquid precipitation. This tipping bucket idea is still used in many of the automated electronic gauges today.

In 1887, Mr. Abbe Cleveland wrote a manual on "Meteorological Apparatus and Methods" for the U.S. Army Signal Corps (agency responsible for U.S. weather observations at the time). In this booklet, Mr. Cleveland described the standards for the weather gauges to be used by the U.S. Army Signal Corps. This standard 8 inch diameter gauge is still in use by many National Weather Service offices and cooperative weather observers across the United States and abroad.

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