

Does it rain 90 days after fog?

Many people in Montana state that it will rain 90 days after there is fog. This brings two questions to my mind where did this statement come from and is it true?

In looking where this statement “it rains 90 days after fog” comes from, the search only found two statements that were similar, however both were for winter snowfall not rain. However, they seem to be related. The other two statements are “the more fog in August the more snow in winter” and “for every fog in August, there will be a snowfall in the winter.” All three statements relate the occurrence of fog with precipitation in the next season. And these all seem to originate from Ben Franklin. In 1784, Ben Franklin wrote an article entitled “Meteorological Imaginations and Conjectures” (<http://www.dartmouth.edu/~volcano/Fr373p77.html>) while he was the U.S. Ambassador to France. In the article, Ben Franklin wrote that early season snowfalls usually melt, however, in the previous winter the early snow did not melt. Mr. Franklin speculated that it was due to the “persistent fog” during the summer months which allowed the ground to be cooler; thus allowing the early snowfall to stick to the ground. Also, with the snow on the ground early in the winter resulted in a harsh winter for France. At the end of the article Ben Franklin asked whether other harsh winters had similar persistent fog during the summer months. (The fog was actually volcanic dust from a volcano in Iceland. Ben Franklin commented on the unusual nature of the fog, it was dry and did not burn off like normal fog. He also speculated the fog was from a volcanic eruption.)

So does it rain 90 days after fog? The generic answer is sometimes. The more scientific answer depends on what the statement means. Is the statement a reliable predictor to whether there will be rain in 90 days? The way to check this is to compare it to how often it rains in general to how often it rains 90 days after fog is observed. In looking at the past several years of observations in Glasgow (January 2000 to July 2006) there is precipitation (rain or snow) 1 out of every 4 days, about 25% of the time. Looking over the same period of time it snowed or rained 90 days after fog about 27% of the time. The difference between the two is very slight and statistically the difference is small, thus the statement that it rains 90 days after fog is really no better than saying it will rain 90 days after today or 90 days after the first robin appears.

In looking at any number of days after fog there is little difference between the average days of precipitation and the average days of precipitation after there is fog, see Figure 1. The figure shows that all days are within 5% of the mean.

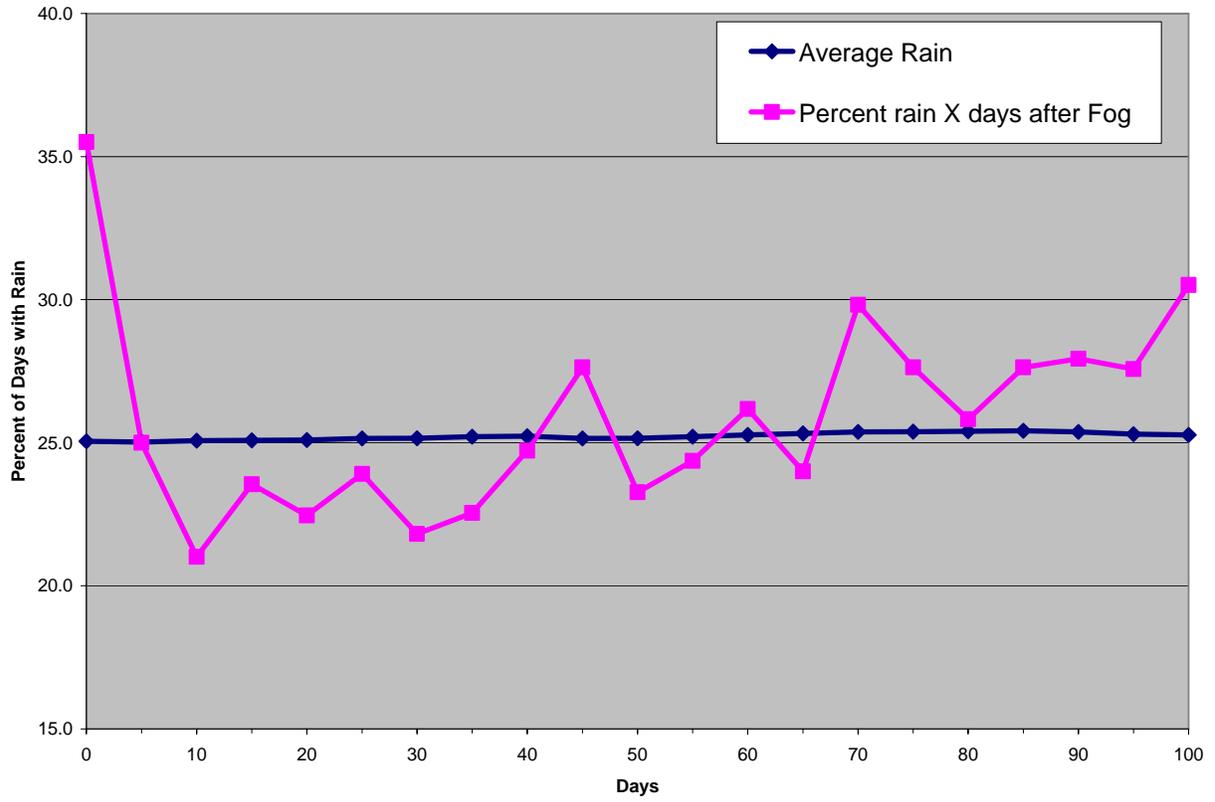


Figure 1. The blue line shows the percentage of days with rain in Glasgow. The purple line is percent of days after fog is observed when it rained.