

Can Plants Predict the Weather?

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Meteorologists now use lots of complicated equipment, such as satellites, to forecast the weather. However, people have always been interested in the weather, particularly farmers and others whose livelihood depended on it. So before this equipment was available people used all the things around them as a guide. In addition to looking at the skies, they also used the behavior of animals, birds and plants as clues to future weather patterns.

Nowadays, people still disagree as to whether this weather lore is simply superstition and old wives' tales, or whether it can in fact help in predicting the weather. It is undeniable though that some very small changes affect plants more than they affect us, so you will have to form your own opinion once you have read some of the examples given below.

Check for humidity. Many people can feel humidity, especially in their hair (it curls up and gets frizzy). You can also look at the leaves of oak or maple trees. These leaves tend to curl in high humidity, which tends to precede a heavy rain.

One of the most reliable of all natural weather indicators is the pinecone. These have traditionally been used to forecast the weather as they change shape according to whether it is wet or dry. In dry weather, pinecones open out as the scales shrivel up and stand out stiffly. When it is damp, they absorb moisture and as the scales become flexible again, the cone returns to its normal shape.



There are a number of flowers that you should look for if you want to know what the weather will be like. One of these is the Scarlet Pimpernel, which has been called the "poor man's weather glass". This is because its flowers

open in sunny weather, but close tightly when rain is expected. When the atmosphere reaches about 80% humidity, the pimpernel closes.

Other plants have similar responses to humidity, while some such as the rhododendron and laurel alter the angle of their leaves with changes in temperature.

The petals of the Morning Glory act in a similar way – with wide-open blooms indicating fine weather and shut petals predicting rain and bad weather. Chickweed, dandelions, bindweeds, wild indigo, clovers, and tulips all fold their petals prior to the rain.

In coastal areas, seaweed is often used as a natural weather forecaster. Kelp, for example, shrivels and feels dry in fine weather, but swells and becomes damp if rain is in the air. Any truth probably comes from salt remaining on the surface of the weed. Salt is hygroscopic, which means it will absorb moisture when the air is humid. This may mean the chance of rain is slightly higher.

An increased growth of mushrooms, moss and lichens indicates moist weather.

Rhododendrons have the unique ability to act as temperature gauges. As the air temperature rises, their leaves begin to unfurl. At 20 degrees they are completely closed and when the temperature reaches 60 degrees, they are completely open.

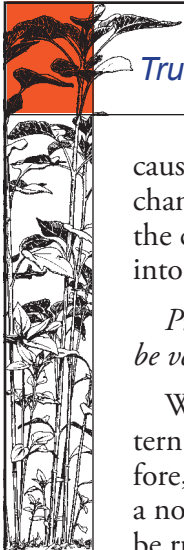
Proverb: When grass is dry at morning light/
Look for rain before the night.

Check grass for dew at sunrise. If it is dry, this foretells clouds, strong breezes and possible rain. But if dew is present, chances are it won't rain. When skies are clear in warmer weather, the loss of surface heat may drop the surface temperature down to the dew point. So if you see dew on the grass, it often indicates a period of clear weather, for a few hours at least. If it rained during the night, then obviously this method will be unreliable.

Other observations link a plant action

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caused by a precursor to a coming weather change. In these, it is not the plant that senses the change but is affected by it. One that fits into this category is:

Proverb: When leaves show their undersides, be very sure that rain betides.

When trees grow, their leaves fall into a pattern according to the prevailing wind. Therefore, when a storm wind (which is naturally a non-prevailing one) occurs, the leaves will be ruffled backwards and show their light undersides. Oncoming stormy weather winds can make the leaves on trees flip and toss and show their undersides. In this example, it is not the plant turning its leaves over in expectation of the weather change, but an increase in wind gustiness prior to a convective rainfall that upturns the leaves. In calm conditions or with the wind coming from its normal, fair-weather direction, the tops of leaves get the most sunlight and turn a darker green. When the wind shifts (a frequent indicator of stormy weather approaching) the leaves get turned the “wrong” way and show their lighter “silver” undersides. Even if rain doesn’t arrive, the silver leaves at least mean that the wind has changed direction and/or increased speed.

Take a deep breath. Close your eyes and smell the air.

- Plants release their waste in a low pressure atmosphere, generating a smell like compost and indicating an upcoming rain.
- Swamps will release methane just before a storm because of the lower pressure, which leads to unpleasant smells.
- A proverb says “Flowers smell best just before a rain.” Scents are stronger in moist air, associated with rainy weather.

A few weather-related, long-range folk predictions involving plants may have some merit, but these usually predict some biological consequence from a seasonal weather observation rather than predict weather from some biological observation.

For example, A year of snow, fruit will grow.

While not really a weather predictor, this and similar sayings may, in some areas and some years, be true. A snowy winter can increase the soil moisture level, thus reducing stress on a fruit tree or bush in the coming growing season. A snowy winter allowing snow to last into early spring may also delay the blooming of fruit trees until the danger of killing frosts has passed. A snowy winter also reduces the depth of frost penetration into the soil by insulating it and thus protecting the plant and its roots from cold damage. A continuous covering of snow also prevents undesirable freezing and thawing cycles of the ground that can damage wheat and other winter grains.

You decide if plants can predict the weather.

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