

ASPIRIN WATER

“Take two aspirin and call me in the morning”.....we’ve all heard that advice from doctors. And mums have been dispensing this all-purpose cure-all to their families as a standard way of providing relief from headaches and sniffles, muscle aches and joint pain.

Then it should be no surprise to learn how an important aspirin ingredient – salicylic acid – is being used as an earth-friendly first aid for warding off plant diseases. Meet Martha McBurney, the gardener in charge of the demonstration vegetable garden at the University of Rhode Island. In the summer of 2005 she tested aspirin water on tomatoes, cucumbers, beans, basil and other plants after reading about it in a gardening publication called “Avant Gardener” from New York.

The results were astonishing.... “What caught my eye in the original “Avant Gardener” article was it said that aspirin is an activator of Systemic Acquired Resistance (SAR) and that the plants, when under stress naturally produce salicylic acid, but not fast enough and in sufficient quantities to really help them out in time. So the bugs get them, and the diseases get them, and they show even more stress.

“But if you give them aspirin, it helps to boost their immune system, kind of like feeding people Echinacea so they don’t get a cold”. How much and how often. The dosage Martha used was 1½ (uncoated) aspirins to two gallons of water (our equivalent is about 9 litres). She also added two teaspoons of yucca extract to help the aspirin water to stick to the leaves better. (The yucca extract can be substituted with a mild liquid soap). Martha explained that the yucca (or soap) prevents the aspirin water from beading up and rolling off leaves of broccoli etc. Finally she sprayed the plants every three weeks.

The summer when Martha first started testing aspirin water, was not the best weather-wise. It was predominately cool, rainy and damp. But what happened was, by the end of the season, the plants in the raised beds with aspirin water looked like they were on steroids! The plants were huge, and green and with no insects. We even saw some disease problems that reversed themselves. We think we got a virus on the cucumbers and the aspirin water seemed to reverse it. The cucumbers ended up being completely healthy.

ASPIRIN IMPROVES SEED GERMINATION. Martha also sprayed the aspirin water on the seeds they directly sowed in the ground. The result they discovered was a 100% seed germination compared to sporadic germination in the other trial beds.

Scientists at the University of Arizona and with the U. S. Department of Agriculture (USDA), curious about Martha’s findings are now studying how salicylic acid prods plants into releasing their natural defences against harmful fungi, bacteria and viruses. According to an article by Dean Fosdick of the Associated Press, “They envisage it is a commercially viable alternative to synthetic pesticides in a natural way to extend the life of susceptible yet popular crops”.

IS IT ORGANIC....well not really? Aspirin (acetylsalicylic acid) is derived from the bark of the white willow tree, *salix alba*. Studies are now being conducted on plants using pure willow extracts to compare the effects to aspirin.

CUT FLOWERS THAT LAST FOREVER? Well, not quite. But current research may explain a modern “old wives tale” of adding an aspirin to a vase of cut flowers to keep the blooms fresher longer. Here’s the explanation.....the cutting of flowers is perceived by the plant as a wound, so it stimulates the production of a substance that not only helps the plant ward off bugs but also hastens ageing or wilting, such as in the case of a cut flower. Aspirin halts the formation of the substance, which in turn keeps the flowers looking young and not wilting prematurely.

SCIENTISTS LAUGHED AT FIRST.....plants weren’t the only things affected by the aspirin water. At first, scientists at the University of Rhode Island gave Martha a bad time about her experiments.

Teased her, mostly, but by the end of the summer, they were so impressed that they are now conducting their own formal investigations.

I've recommended it to just about everybody. The people who have tried it, that is, people who grow from oats to orchids, have found that plants do remarkably better when given small amounts of aspirin water. I've tried it on my houseplants and it does really well. Plants are more vigorous and I'm having fewer problems with aphids and the typical things that can build up on houseplants over winter. So next time your plant is looking a little feverish or flushed, consider reaching for some aspirin for treating what ails it.

Editor suggests 1 soluble 300mg aspirin tablet to four (4) litres of water and add a small amount of wetting agent. Treat orchids every 3-4 weeks.

Aspirin cures common plant headaches

Q: I've heard that using aspirin water on my plants can help promote plant growth and prevent disease. Is this true?

Harvey Ellis, Atlanta, GA

Aspirin water triggers a plant's natural defenses.

A: *Rebecca Brown, professor of plant sciences at the University of Rhode Island, replies:* Although the complete effects of treating plants with an aspirin-water solution are unknown, studies have shown that applying salicylic acid (aspirin is acetyl salicylic acid) to plants can induce resistance to pathogens, environmental stresses, and some insects. This protection should allow the plants to grow more vigorously. Under extremely stressful conditions or those highly favorable to the growth of diseases, however, salicylic acid may not prevent all damage from stress or disease. Salicylic acid is a naturally occurring compound in plants. When a plant is stressed or attacked by a pathogen, this compound stimulates the plant's internal defense pathways. Treating a plant with additional salicylic acid appears to trigger the plant's defense pathways in the same way.

In the summer of 2005, I directed a group of master gardeners with experiments on tomatoes. We looked at the effects of two strengths of aspirin water and the commercial product Messenger compared to plants sprayed with just water. Messenger activates the same internal defense system as salicylic acid but at a different point along the pathway, which may provide broader protection. Because of the dry conditions, none of the plants developed any disease. All of the plants grew equally well. We found that the plants treated with a solution of 250 milligrams of aspirin to 1 gallon of water and the plants treated with Messenger yielded more but smaller fruit than the control.

An aspirin-water solution of 250 to 500 milligrams (one or two regular aspirin tablets) of aspirin per gallon of water provides a solution similar to what has been tested; solutions at higher rates have been shown to burn foliage. Any brand of aspirin will work, but plain, uncoated tablets dissolve best. The solution should be applied every two weeks and may be used to water germinating seeds and new transplants.

Another form of salicylic acid that is gaining attention is willow water, made from steeping fresh-cut willow branches in water. Willows are naturally high in salicylic acid. The exact amount of salicylic acid in willows is unknown, however, so the amount to use and the timing of application is less certain. Willow water might be worth investigating as a source that could meet organic certification guidelines (neither aspirin nor Messenger do).

While there's no harm in experimenting with these solutions, keep in mind that aspirin water and willow water are not registered pesticides. All of these products need to be applied preventively, before the first sign of disease. They may prevent infection but will not kill fungi or bacteria already infecting the plant. It may also take two weeks for the salicylic acid to activate the pathway and protect the plant.

Taken from an article found on internet by [Marion Owen](#), Fearless Weeder for [PlanTea, Inc.](#) and Co-author of *Chicken Soup for the Gardener's Soul*