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**EFFECT OF WATER PH ON THE STABILITY OF PESTICIDES**

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**ABSTRACT**

The efficiency of most insecticides depends on the water's pH level. Most pesticides work best in acidic conditions, with a pH between 5.0 and 6.0, to prevent chemical hydrolysis (breakdown). Buffers are ideal for lowering the pH of water because they stabilize the solution and prevent the pH from changing as the water temperature rises or falls. A pH metre, litmus paper, or pool test kits are all viable options for determining the level of acidity or alkalinity in a water sample. Make use of what helps you most. The acidity of water varies widely from one spraying to the next because of the influence of a wide variety of environmental conditions, including temperature, sunshine, precipitation, drought, and so on. Hence, you need to test the water's pH before each spray. Many buffers are available, and they all perform similarly. Make do with what you have at hand. Nevertheless, use 1-2 ounces per 50 gallons of water, mix, and retest pH to ensure the buffer is working properly. Depending on the dissolved substances in your water, a buffer may be necessary. The recommended amount on the bottle may be 1 quart, but the actual amount you'll need could be less or more. To be safe, start with 2 ounces for every 20 gallons of water and adjust the pH by adding more or less of the acid or base as needed. When the water becomes too acidic, it might be harmful to your plants if you apply too much of a buffer. With the use of a buffer, the initial knockdown of your spray will be greater, and the residual effect will last longer. In the long run, this will help you save money while minimizing the quantity of sprays you need to use to keep your crop healthy and protect the environment from pests and harmful insects.