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GROWTH AND DEVELOPMENT OF *ERYSIPHE PISI* IN WATER

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This investigation examined the reported harmful effects of free water on powdery mildew fungi.

Germination of conidia of *E. pisi* on or in water was abnormal and slightly lower when compared with germination on pea leaves. Although appressoria were rarely observed on water they were abundantly produced by conidia submerged under water.

When conidia that have been kept on or in water for varying periods were transferred to pea leaves there was an improvement in germination. Some ungerminated conidia and some conidia that germinated atypically produced new germ tubes. This tendency to form new germ tubes declined with duration of conidia on or in water. Conidia retained the ability to cause infection after being transferred from water although this tendency declined sharply with duration of conidia on or in water. Further observations on samples of germinated conidia transferred to leaves showed that some conidia continue to grow normally but the colonies were rather small and sporulation was delayed.

Germination of conidia, mycelial extension and conidiophore initiation occurred on pea leaves completely submerged under water. There was no difference in the infectivity of conidia produced by the immersed and unimmersed colonies.

The evidence suggests that the harmful action of water is exaggerated.