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INTEGRATION OF THE PARASITIC WASP, *ENCARSIA FORMOSA* WITH THE FUNGAL PATHOGEN, *VERTICILLIUM LECANII* FOR THE CONTROL OF THE GLASSHOUSE WHITEFLY, *TRIALEURODES VAPORARIORUM*

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Possibilities of using sprays of blastospores of *Verticillium lecanii* (Zimmermann) Viegas for limitation of the glasshouse, whitefly, *Trialeurodes vaporariorum* Westwood during short dull days early in the year in England before the introduction of *Encarsia formosa* Gehan was investigated.

Blastospores applied under low humid conditions to a severe whitefly infestation on tomatoes in glasshouses in February killed 37–47% of the scales. A further spray 18 days later, killed 46–67% of the scales under more humid conditions. Mortality in the control infestation was negligible with no signs of fungus spread into the control. Releases of *E. formosa*, 2, 3 and 4 weeks after the second spray achieved progressive control while mortality due to the fungus declined.

Despite the heavy infestation used, control was good. Plants with *V. lecanii* and *E. formosa* had very few leaves with sooty mould (5%) whereas those with *E. formosa* alone or neither had many (> 25%). The proportion of live whitefly scales on the former plants was about half that on the latter at 9 weeks after the last spray.

The proportion of *E. formosa* not emerged from scales and believed to be dead, was similar in all compartments with and without fungus. Thus it is unlikely that the fungus had spread to parasitised scales and killed the parasites. Fungus killed adult *E. formosa* were rare.

Thus the early season sprays of fungus greatly improved control of the whitefly.