Rain-proofing Fungicides Study.

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Dr Ian Harvey of PLANTwise Lincoln recently investigated the rain-proofing characteristics of a range of different fungicides when combined with **Nu-Film-17**. A bioassay technique was used to determine the longevity of fungicidal activity following simulated rainfall.

Nu-Film-17, a terpenic polymer (ai di-1-p-menthene) is a combination rain-proofer, sunscreen, wetter and sticker that forms a biodegradable layer on the leaf encapsulating pesticides and foliar fertilisers.

The bioassay utilised seedling cabbage (*Brassica oleracea var. capitata*) and the brown leaf spot pathogen of brassicas – *Alternaria brassicae*.

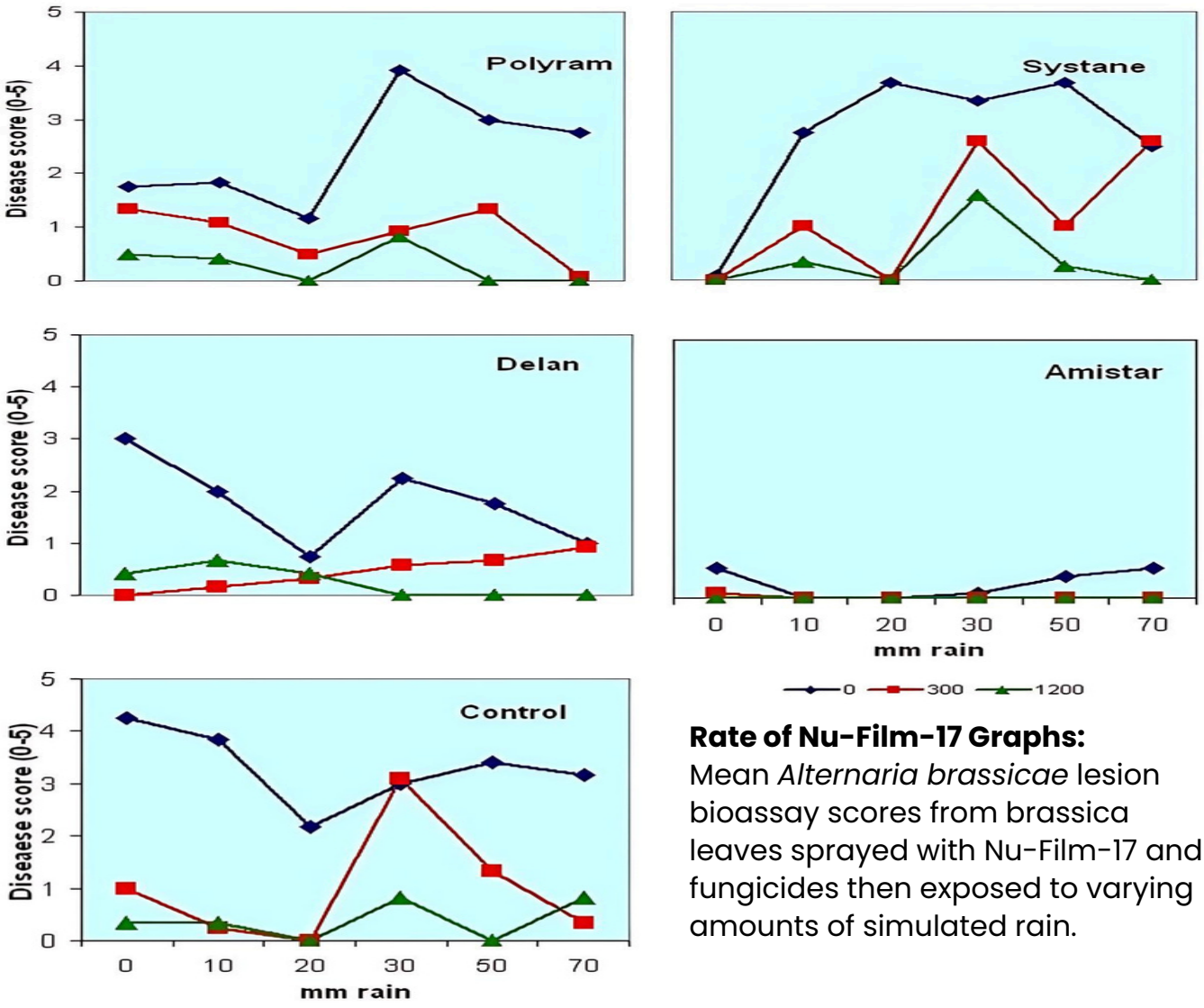
Results and discussion:
While not a fungicide **Nu-Film-17** showed some fungi-static activity. (See Control Graph - page 2)

High level rain events (above 300mm) appeared to generally increase the tolerance of the test leaves to A. brassicae infection, probably through increased turgor of the leaf cells.

As indicated by the graphs below, **Nu-Film-17** has the ability to enhance the performance of fungicides from various chemical groups. High levels of rainfall or irrigation have little effect on removing fungicides if combined with **Nu-Film-17**. Rates of 300ml (red line) per ha and 1200 ml (green line) per ha were used along side a control (blue line) with no **Nu-Film-17**. The effects of rainfall degrading the fungicides activity were measured at 0,10,20,30,50 and 70mm of rain.

The graphs below show **Nu-Film-17** not only enhanced the performance of protectant fungicides but also aided the performance of systemic fungicides.

RainGard is also a terpenic polymer and will give similar rain proofing to **Nu-Film-17**. However being a longer chain polymer it degrades more quickly under ultra violet light and is therefore less persistent than **Nu-Film-17**.



Rate of Nu-Film-17 Graphs:
Mean *Alternaria brassicae* lesion bioassay scores from brassica leaves sprayed with Nu-Film-17 and fungicides then exposed to varying amounts of simulated rain.

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