RNA spray could fight fungal disease in barley crops

Spraying barley crops with RNA molecules that inhibit fungus growth could help protect the plants against disease, according to a new study published in *PLOS Pathogens*.

Plant diseases caused by fungi that grow on crops seriously threaten the world's food supply, and fungi can develop resistance to traditional pesticides. To improve the antifungal arsenal, Aline Koch of Justus Liebig University, Germany, and colleagues are investigating RNA-based techniques that fight fungi at the genetic level.

In the new study, Koch's team sprayed a double-stranded RNA molecule called CYP3-dsRNA onto barley leaves and exposed the plants to a common disease-causing fungus known as F. graminearum. When absorbed by fungal cells, CYP3-dsRNA is known to target and silence the expression of three key F. graminearum genes, inhibiting the pathogen's growth.

The scientists found that CYP3-dsRNA inhibited fungus growth on sprayed plants but not on unsprayed plants…

These findings will help inform future research into RNA-based control of plant pathogens. … However, scientific and societal obstacles to genetic engineering pose challenges for this technique. Spraying RNA directly onto crops could be a more viable, sustainable, and environmentally friendly alternative.

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis. Read full, original post: Antifungal RNA spray could help fight barley crop disease