

Title (en)  
METHODS USING LIGHT EMISSION FOR DETERMINING THE EFFECTIVENESS OF PLANT TREATMENT AGENTS IN CONTROLLING PLANT DISEASE ORGANISMS

Title (de)  
LICHTEMISSIONSVERFAHREN ZUR BESTIMMUNG DER EFFEKTIVITÄT VON PFLANZENBEHANDLUNGSMITTELN ZUR KONTROLLE VON ERREGERN VON PFLANZENKRANKHEITEN

Title (fr)  
PROCEDE POUVANT DETERMINER A PARTIR D'UNE EMISSION DE LUMIERE L'EFFICACITE D'AGENTS DE TRAITEMENT DES PLANTES CONTRE DES ORGANISMES VECTEUR DE MALADIES DES PLANTES

Publication  
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Application  
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Abstract (en)  
[origin: WO0208734A2] Methods are provided for determining the effectiveness of a plant treatment agent in controlling a plant disease organism. The methods involve (a) applying the plant treatment agent to a substrate, (b) inoculating the substrate with the disease organism, and detecting photon emission from light-generating moieties. The methods also involve (1c) after a period of time in which the disease organism can grow, applying a pro-light-generating moiety which is selectively transformed by the disease organism or the substrate to a light-generating moiety, (1d) detecting photon emission from the light-generating moiety (e.g. over an area of the substrate), and (1e) determining the effectiveness of the plant treatment agent based on the amount of detected photon emission and/or the fraction of the substrate area from which photon emission is detected. Alternatively the methods can further involve (2c) after a period of time in which the disease can grow, detecting photon emission from an endogenous light-generating moiety, and (2d) determining the effectiveness of the plant treatment agent based on the detected photon emission. This invention further provides a process for producing a crop protection agent that is suitable for controlling a plant disease caused by a plant disease organism and comprises a plant treatment agent. This process comprises determining the effectiveness of the plant treatment agent in controlling the plant disease organism as indicated above. This invention also provides a method for controlling a plant disease caused by a plant disease organism (for example, a fungal plant pathogen). This method comprises determining that a plant treatment agent is effective for controlling the plant disease organism as indicated above; and applying to the plant or portion thereof to be protected, or to the plant seed or seedling to be protected, an effective amount of said plant treatment agent.

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