

## Operator Exposure during Application of Pesticides to Tunnel Grown Crops

Can you help us understand pesticide exposures during applications in crop tunnels? We need volunteers to have their exposures measured while making applications using vehicle mounted/trailed equipment, for example horizontal boom sprayers, table-top sprayers or broadcast air-assisted sprayers.

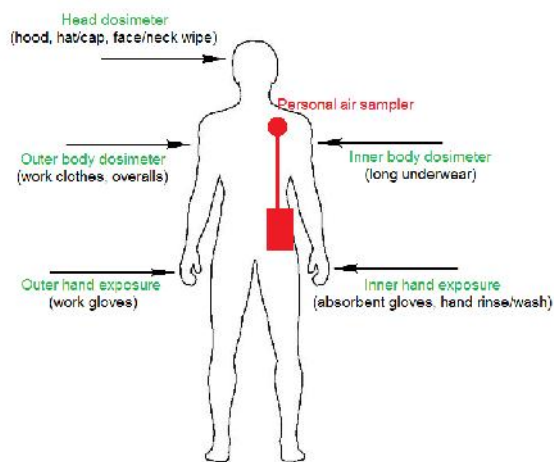
**Background:** Plant protection products (PPP) must have HSE authorisation before they can be used. This requires an assessment of potential health risks for the operator supported by exposure data, usually provided by an exposure study or from regulatory exposure models.

The current regulatory guidance on exposure assessment for PPPs identifies data gaps which include tunnel exposure scenarios using vehicle mounted equipment such as boom or broadcast air-assisted sprayers. Without this specific exposure data precautionary approaches are taken, but it is not clear if the appropriate standard of protection is provided. This may mean that potentially acceptable uses are not allowed or are restricted. HSE needs more information to understand these exposures.

This work will inform HSE's regulatory decisions in the authorisation of PPPs for use on protected crops and for uses involving weed wipers.

**Aim:** The aim of this work is to collect robust operator exposure data for the application of pesticides to tunnel grown crops using vehicle mounted equipment.

**Method:** The project team will use standard procedures for studies for occupational exposure to agricultural pesticides. They will come to the site of application and take observations and measurements whilst the volunteer operator applies pesticides using a vehicle mounted equipment over a typical working day. This will include the following:



Types of Dosimeters

- Sample skin exposure using outer and inner clothing, hand washes and face/neck wipes (new work clothes provided)
- Sample inhalation using personal samplers worn in the breathing zone
- Collect urine samples for biological monitoring (optional)
- Gather observations of actual working practices

Ethics approval will be obtained to cover all aspects of the study. The findings will remain anonymised and reported at/in a scientific conference and journal. A short article will be written for a trade paper or similar.

**Benefits:** Personal exposure assessment of operators/members  
Identification of potential exposure risks of operators/members  
Involvement with, and understanding of, potential changes to PPP assessment  
Engagement with the UK's national regulator for PPPs  
Knowledge of any changes that may affect operators/members

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