

During Spraying

Protective Equipment



Working with pesticides can be dangerous and cause illness unless proper precautions are taken. Many pesticides, if spilt on the skin, can be absorbed into the body unless they are immediately washed off. A splash to the face could damage the eyes and inhaling or swallowing chemicals can also cause problems.

Unless indicated by a specific risk assessment, the minimum protective clothing that should be worn whilst handling a concentrated pesticide is:



Chemical protective gloves



Coveralls



Rubber boots



Face shield (for liquids)

Some pesticides may pass through protective clothing so spillages should be washed off immediately.

Risks can be minimised by following the few simple guidelines below:

Before Use

- Select the least hazardous pesticide and formulation suitable for the job, (for example, water-based concentrates are generally less hazardous than solvent-based ones)
- Refer to the COSHH assessment
- Ensure all staff are properly trained
- Read the labels and follow the manufacturers' instructions carefully
- Select and wear the right protective clothing for the job. This should reflect the type of pesticide being used, its method of application and where it is being handled. Seek further advice from the codes of practice or your supplier if required
- Check protective clothing for damage both before and after use and repair/replace as necessary
- Always have clean water available for personal washing as well as decontaminating protective clothing and spray equipment
- Ensure all spray equipment is well maintained and checked regularly. Leaking equipment may cause unnecessary contamination and waste expensive product
- Plan the spraying around the weather conditions to minimise spray drift.

During Use

- Follow a safe system of work to minimise the period of risk and exposure to both operators and others (e.g. minimise the number of people involved, never eat, drink or smoke whilst handling pesticides, post warning signs for others)
- Containers of concentrate must be carefully handled and engineering controls used whenever possible (e.g. fill sprayers using an induction bowl, pour concentrate bottles on their sides to minimise splashing).
- Whenever spraying from a vehicle use one with a fitted cab. If possible also use suitably filtered cab ventilation rather than opening the windows.

After Use

- Wash gloves, boots, waterproof clothing and eye protection. Avoid soaking as this can spread contamination over previously clean surfaces.
- Clean any re-usable face masks and replace any cartridge filters as required, following the manufacturer's instructions. Replace "single shift" type disposable masks after use.
- Disposable coveralls should be treated as such and not worn repeatedly once contaminated.
- Cotton type coveralls should be washed on a regular basis and immediately changed for clean ones if contaminated.

Storage and Disposal

- Do not take protective clothing home. Store in a clean well ventilated cupboard or locker. Store clean clothing separately from dirty clothing in an area where it cannot become accidentally contaminated. Keep clothing separated from dirty equipment.
- Keep dirty clothing and equipment out of the spraying vehicle. Fit a small storage box outside the cab with separate clean and dirty sections
- Dispose of used/redundant PPE as contaminated waste through a reputable waste disposal contractor use www.wastedirectory.org.uk. For more advice use the EA's agricultural waste help-line on 0845 603 3113

Selecting the Correct Type of Personal Protective Equipment



Chemical Protective Gloves

- People who handle pesticides need to wear chemical-resistant gloves that protect the whole hand and the wrist. Gloves made from nitrile rubber should be used as they are generally more resistant to pesticides than those made of latex/natural rubber.
- The gloves selected should be at least 0.5mm thick and 300mm long. Your supplier or glove manufacturer should be able to provide specific information on the gloves you use.
- Leather or stitched working gloves are **not** suitable for chemical handling.



Eye and Face Protection

- A full face shield should be used to protect the face and eyes from splashes (i.e. when handling open containers of liquid concentrate)
- Chemical splash goggles give even better eye protection and can also be used with a suitable respirator when required



Coveralls

- The coverall should be resistant to the penetration of liquids, dusts or granules depending on the circumstances
- Some activities may risk contamination to the head (e.g. spraying of top fruit) and in this case a coverall with hood should be used
- Coveralls should be worn over boots, rather than tucked in and normally gloves should be worn over the sleeves to minimise the risk of getting contamination on the inside of the glove (see Over or Under ? above)
- A plastic apron would also be useful for protecting coveralls when handling concentrate
- Additional waterproof clothing (e.g. over trousers) may be required for hand spraying or sheep dipping operations
- Coveralls are classified into a number of "types" depending on their ability to protect the wearer, those of relevance are:
 - Type 6: Protective clothing offering limited protection against splashes and aerosols of liquid and solid particles
 - Type 5: Particle tight protective clothing
 - Type 4: Chemical protective clothing with spray tight connections
 - Type 3: Chemical protective clothing with liquid tight connections



Protective Boots

- Wellington boots should be worn whenever there is a risk of contamination to the lower leg (e.g. mixing/measuring, knapsack spraying or sheep dipping)



Respiratory Protective Equipment

- Respiratory Protective Equipment (RPE) may be required when handling dusts, fogs, smokes or vapour. It may also be needed for spraying using vehicles without an enclosed cab or hand spraying in enclosed spaces or above waist height.
 - The filter type needed will be different for a dust or spray than for a vapour and selection must be based on label information or a COSHH assessment. Basic requirements would be:
 - Airborne dust/spray particles (FFP2-SL disposable mask or P2 cartridge filter)
 - Airborne vapour (combined A1P2 cartridge filter)
- If in doubt check the suitability with your supplier.**

Over or Under?

The operator should assess the risks and how to obtain the greatest protection and minimise the chance of contaminating the skin before deciding how to wear PPE. General advice is:

Gloves over coverall - if the arm is raised when spraying.

Gloves under coverall - if the arm is lowered when spraying or large volumes of spray solution are likely to reach the arm

Coveralls over boots so any contamination on the coverall runs down the outside of the boot

Further information and advice

- Code of Practice for using Plant Protection Products
- BCPC Safety Equipment Handbook www.bcpc.org.uk
- CPA Best Practice Guide on Hand Protection
- or **contact your supplier**

This guide outlines some basic advice on the use of protective clothing. Its advice supports manufacturers' recommendations and legal requirements which should always be observed. For details of glove and PPE suppliers contact the Personal Safety Manufacturers Association (PSMA) who are part of the British Safety industry Federation (BSIF) www.bsif.co.uk



This guide was updated by the Crop Protection Association as part of The Voluntary Initiative. The advice was revised after consultation with HSE, CRD and NPTC and CPA members.

The Voluntary Initiative is a programme of measures to promote responsible pesticide use

www.cropprotection.org.uk

www.voluntaryinitiative.org.uk

