



# Personal Protective Equipment

**Shawn Appling**

**Associate Extension Agent, Culpeper County Office**

*Serving Culpeper, Madison, and Orange*

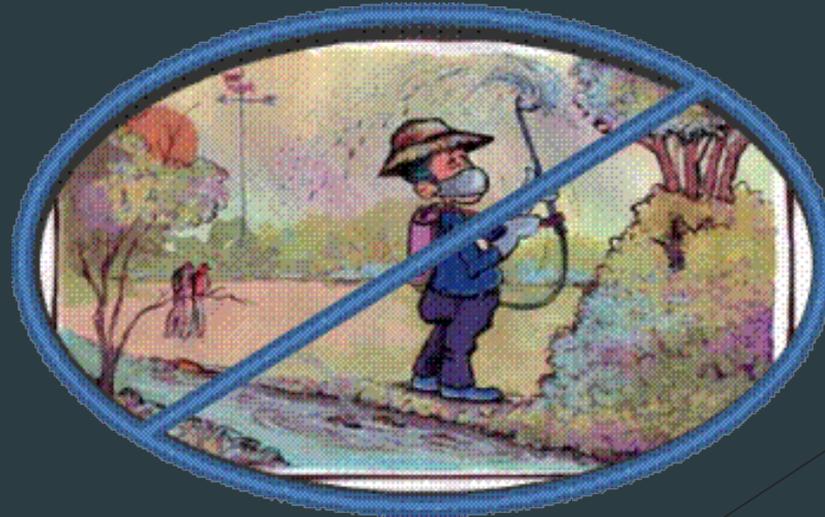
# What is Personal Protective Equipment (PPE)?

- ▶ Any Clothing or Devices Used to Protect from Contact with Pesticides or Residues
- ▶ Minimum Required PPE:
  - ▶ Long Pants
  - ▶ Long-sleeved Shirt
  - ▶ Socks
  - ▶ Shoes
- ▶ Check the Label for PPE requirements



# Chemical Resistant Clothing

- ▶ Check the Label to See if it's Required
  - ▶ Chemical Resistant, Water Proof, and/or Water Resistant Clothing
- ▶ Do Not Use – Cotton, Leather, or Cloth Lined Aprons, Footwear, or Gloves



# Best Choices for Chemical Resistant Clothing



- ▶ Aprons, Boots, Gloves, Hoods, and Suits made of:
  - ▶ Plastics, such as PVC
  - ▶ Synthetic Rubber, such as Butyl, Neoprene, Nitrile, or Vitron
  - ▶ Nonwoven Fabrics Coated with Plastic or another Barrier Material

# Chemical Resistant Suits

- ▶ **Plastic and Rubber:**
  - ▶ 1 - Piece Coveralls
  - ▶ 2 - Piece Jacket and Pants
- ▶ **Coated Nonwoven Fabric:**
  - ▶ 1 - Piece Coveralls

**Suits of either Design  
Should Fit Loosely**



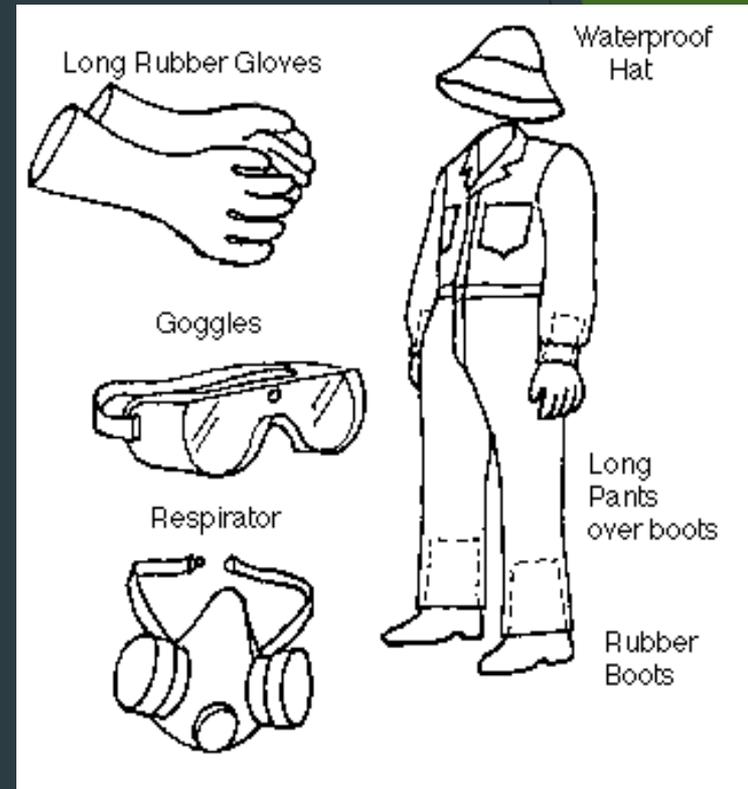
# Chemical Resistant Aprons



- ▶ Label may Require use when Handling Concentrates
- ▶ Or when Mixing and Loading Pesticides
- ▶ Use Bib-top Aprons Made of:
  - ▶ Butyl, Nitrile, or Foil Laminated Materials
- ▶ Aprons Extending from your Neck to Knees offers Best Protection

# Footwear, Gloves, and Hats

- ▶ **Check the Label for Requirements**
- ▶ **Prevent Chemical Run-off in Gloves:**
  - ▶ **Downward Spraying = Sleeves Outside Gloves**
  - ▶ **Upward Spraying = Sleeves Tucked in Gloves**
- ▶ **Don't Tuck Pant Legs in your Boots**
- ▶ **Don't use Hats containing Cotton, Leather, or Straw**



# Protect Your Eyes

- ▶ **Some Labels require Eye Protection but it's a Good Idea when**
  - ▶ **In Open Cabs during Air-blast Applications**
  - ▶ **Applying Mists, Fogs, or Aerosols indoors**
  - ▶ **Situations where you will be Enveloped in Spray, Mist, or Dust**



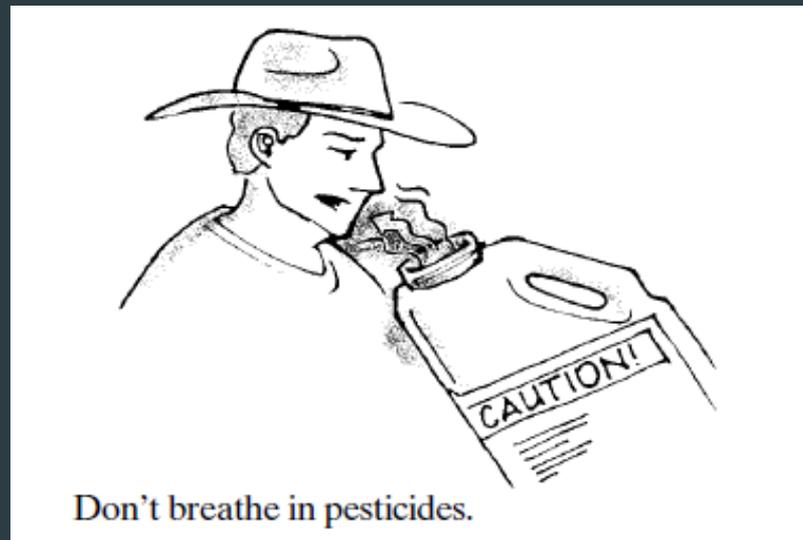
# Protect Your Eyes Continued

- ▶ **Examples:**
  - ▶ **Chemical Splash-proof Face Shield, Goggles, or Safety Glasses with Shields at Brow and Sides**



# Respirators Protect Your Lungs

- ▶ **Check the Label and Consider Wearing when:**
  - ▶ **Label States do not Breathe Vapors or when it States Harmful or Fatal if Inhaled**
  - ▶ **Possibility of Exposure to Pesticides that could be Inhaled**



# Types of Respirators

- ▶ **Atmosphere-Supplying Respirators**
  - ▶ Self-Contained Breathing Apparatus
  - ▶ Airline Respirators
- ▶ **Air-Purifying Respirators**
  - ▶ **Powered**
    - ▶ **Tight-Fitting, Loose-Fitting Hoods or Helmets**
      - ▶ **Loose-Fitting Types create Positive Outward Pressure keeping Contaminants out of Helmet or Hood**
        - ▶ **No Fit Testing Required**
        - ▶ **Good for Pesticide Exposure Lasting Hours**
        - ▶ **Heat Stress Situations**



# Types of Respirators Continued

## ▶ Air-Purifying Respirators

### ▶ Nonpowered

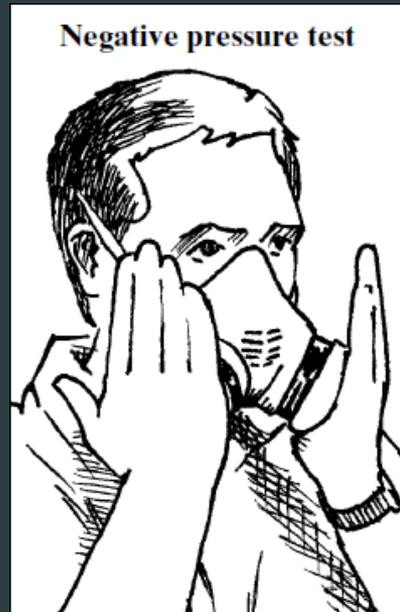
#### ▶ Half-face or Full-face Masks

- ▶ Particulate-filtering
- ▶ Cartridge
- ▶ Canister



# Checking Respirators Before Use

- ▶ **Fit Testing**
  - ▶ Conducted before 1<sup>st</sup> Use and Every Year Thereafter
  - ▶ 2 types: Qualitative and Quantitative
    - ▶ Qualitative uses a Chemical Irritant to Judge Fit
    - ▶ Quantitative uses an Electronic Measuring Device to Detect Leaks
- ▶ **Fit Checks - Perform Every Time before Spraying**

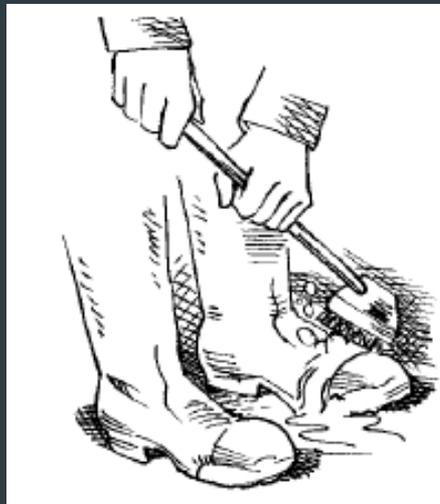


# Pesticide Solvents

- ▶ **Can Break Down or Dissolve some PPE materials**
- ▶ **Common Solvents: Alcohol, Methanol, Water, Xylene**
- ▶ **Symptoms:**
  - ▶ **Color Change**
  - ▶ **Becomes Soft or Spongy**
  - ▶ **Swelling or Bubbling**
  - ▶ **Becomes Jelly-like**
  - ▶ **Cracks or Holes**
  - ▶ **Becomes Stiff or Brittle**

# Maintaining PPE

- ▶ Disposable Aprons, Coveralls, Gloves, and Shoe Covers should be Discarded after Each Use
- ▶ Make sure to Wash Reusable PPE with Water and Soap between Uses
  - ▶ Check for Signs of Wear, or Holes before Using
  - ▶ Gloves Generally Wear Out before Other PPE



- ▶ **Make sure to Wash any Clothing that may have Pesticide Residue Separately from Family Clothing**
- ▶ **Eyewear, Face Pieces, and Respirator Bodies should be Washed in Hot Water and Soap after Each Use**
- ▶ **Cartridges should be Stored Separately in Plastic Bags**

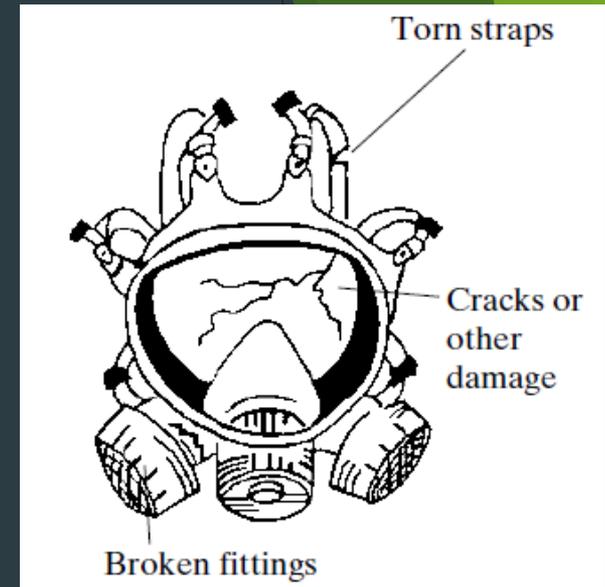


# Washing Contaminated Clothing

- ▶ Wash only a Few Items at a Time
- ▶ Pretreat with a Heavy-duty, Liquid Detergent
- ▶ Set Washing Machine to Longest Wash Cycle, with 2 Rinse Cycles and use Hot Water
- ▶ Use 2 Wash Cycles if Clothing is Moderately or Heavily Contaminated
- ▶ Hang the Clothes to Dry
- ▶ Run the Washer Empty 1 Cycle to Clean the Machine

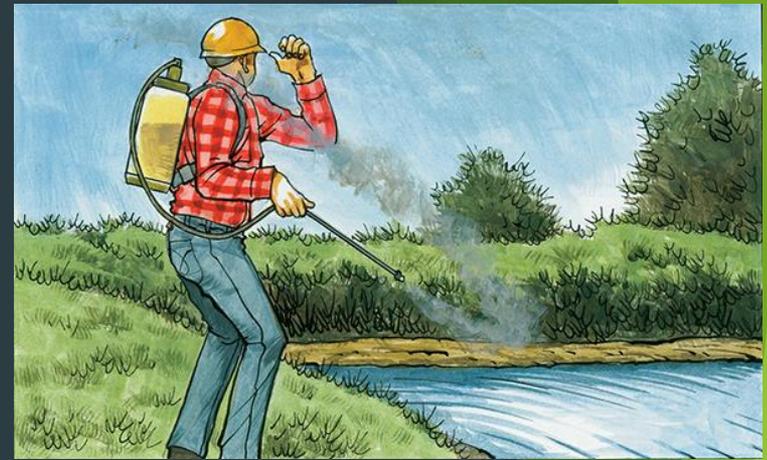
# Taking Care of Your Respirator

- ▶ **Inspect Before each Use**
  - ▶ Loose or Teared Straps
  - ▶ Cracked Lens
  - ▶ Face Seal Cracks, Dirt, or Tears
  - ▶ Worn, Damaged, or Missing Parts
- ▶ **Washing Respirator**
  - ▶ Disassemble
  - ▶ Use Hot Water and Soap
  - ▶ Scrub each Part
  - ▶ Cartridges and Filters can't be Cleaned
  - ▶ Air Dry before Reassembling



# PPE Recap

- ▶ PPE is for your Protection!
- ▶ Always Read the Pesticide Label to Determine the Correct PPE
- ▶ If you Feel Ill Leave the Area Immediately and Find Help!
- ▶ Use Caution and Common Sense to Prevent Pesticide Exposure!



# Questions?

