

Safety Concerns and Personal Protection Relative To Application Method and Product



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<http://extension.uga.edu/programs/pesticide-safety/>

PPE Minimizes Your Exposure While Handling Pesticides

➤ The absolute minimum to wear:

- Long-sleeved shirt
- Long trousers or coveralls
- Gloves, waterproof
- Closed-toe shoes plus socks
- Hat, waterproof



Protect Yourself!

understand PPE's limitations

Read the Label for the Required PPE!!!

- Follow all label directions for PPE
 - Handlers (measuring & mixing)
 - Applicators
 - Maintenance & cleanup
- *Minimum* requirements are given – you can wear more



Chemical-Resistant Clothing



PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are Chemical-resistant to this product are listed below. If you want more options, follow the instructions for category F on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear: A) Long-sleeved shirt; B) Long pants; C) Chemical-resistant gloves such as Barrier Laminate, Butyl Rubber, Nitrile Rubber or Viton; D) Shoes plus socks.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.



- Read the label
 - Specifically, required clothing or equipment
- Watch for signs of wear & degradation:
 - Color changes – spongy – swollen – jelly-like
 - Cracked – brittle
- Plastic is the most chemical-resistant PPE material and most common one found

Your Greatest Protection Is Using Gloves!

- Especially when handling concentrates
- Unlined and waterproof
- Check for holes
- If spraying overhead, tuck sleeves inside gloves...



... and fold the cuffs up

Gloves can reduce dermal exposure by as much as 99% when mixing, loading, and applying pesticides

Chemical-Resistant Suits

- Offers the most protection
- Wears out with chemical contact over time
- Made of coated plastic or rubber
- May be too warm on hot days
 - Drink plenty of water!
 - Take frequent breaks!
 - Watch out for heat stress



Tyvek, Tychem, etc.

Foot & Head Wear

- No sandals, tennis shoes, leather footwear!
- Consider wearing unlined, rubber boots... even if not required
- Hang pant legs **outside the boots!**
- Use a liquid-proof wide brimmed hat or hood
 - When required by the label's PPE
 - Important for overhead applications
 - Needed for spray & fogging applications



Eyewear

➤ When required by the label!

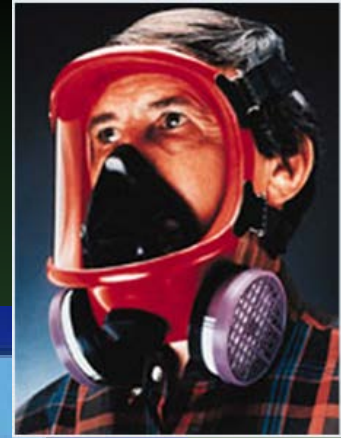
Several types of protective eyewear are available:

- Goggles
- Face shield
- Safety glasses with brow and side shields
- Full helmet with skirt and respirator filters (Kasco helmet)

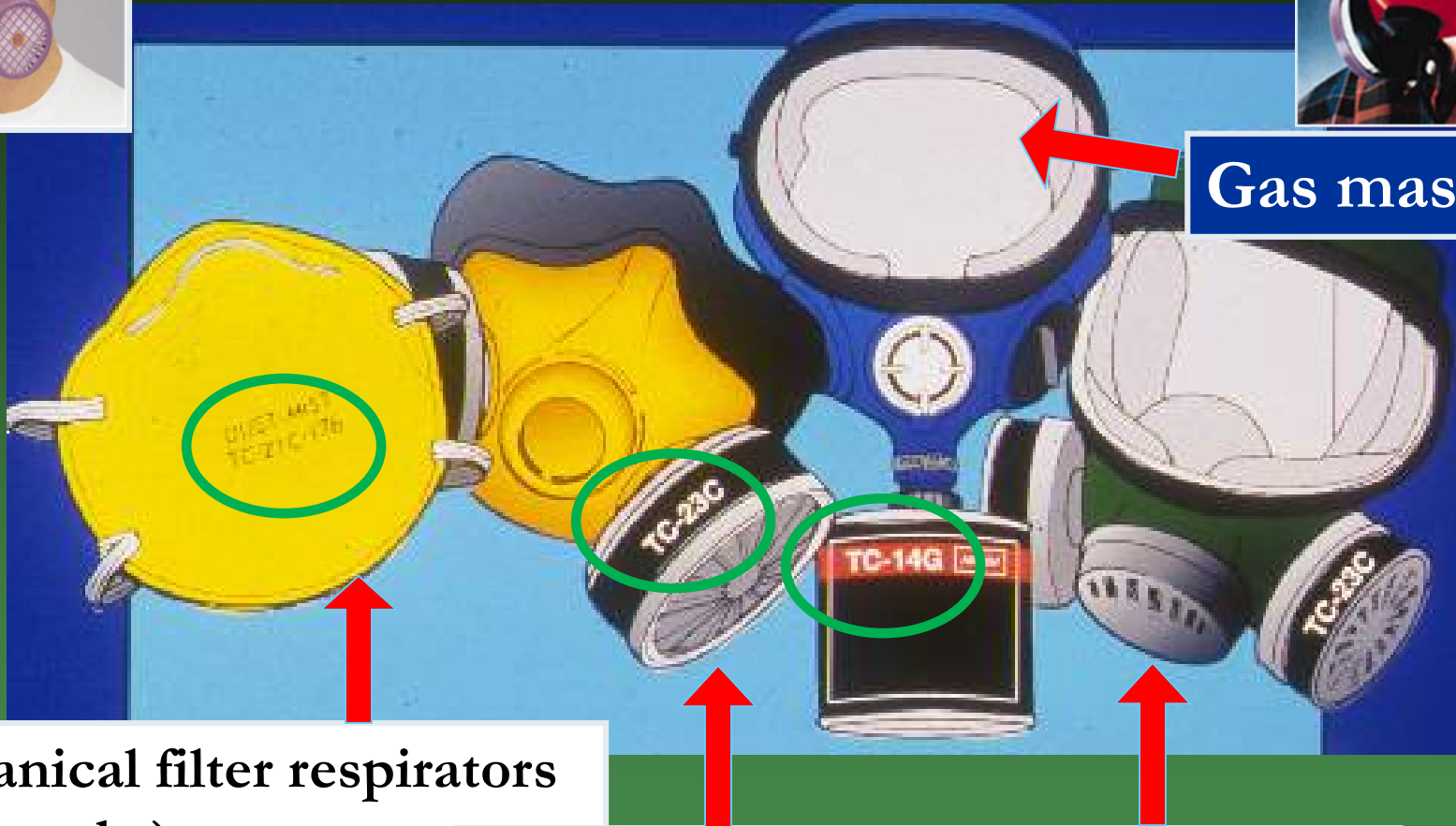


Respirators

Air-Purifying



Gas masks



**Mechanical filter respirators
(dust masks)**

Chemical cartridge respirators

- National Institute of Occupational Safety and Health (NIOSH)
- Make sure the cartridge or filter is rated for the pesticide you are using

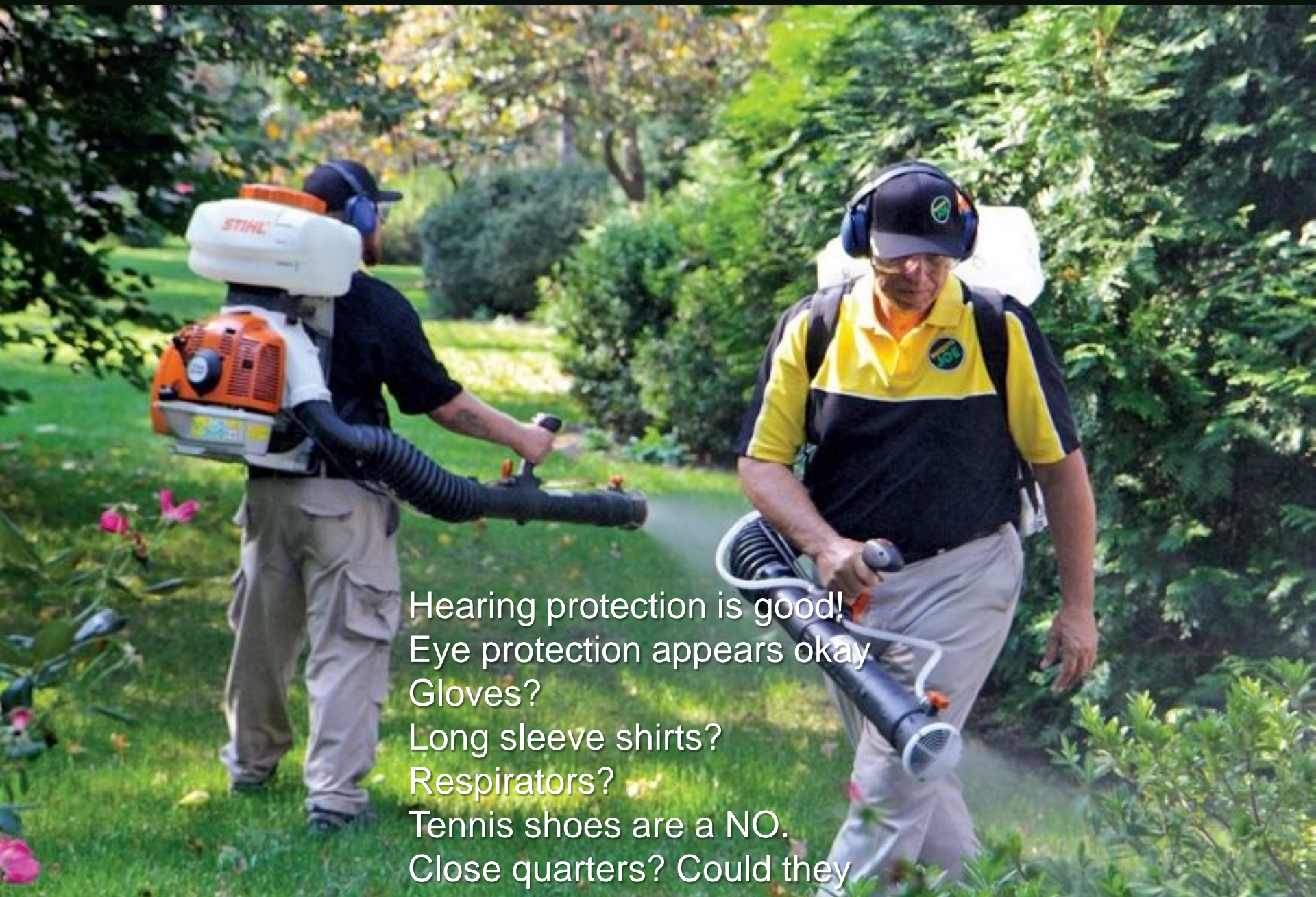
Now, Lets Look at Some Examples!

- Tell me what's wrong in each case ...
 - First picture:





Is this guy doing anything right?
No PPE!
Wrap-around sunglasses okay?
Tripping on hanging line possible?



Hearing protection is good!
Eye protection appears okay
Gloves?
Long sleeve shirts?
Respirators?
Tennis shoes are a NO.
Close quarters? Could they
spray each other?



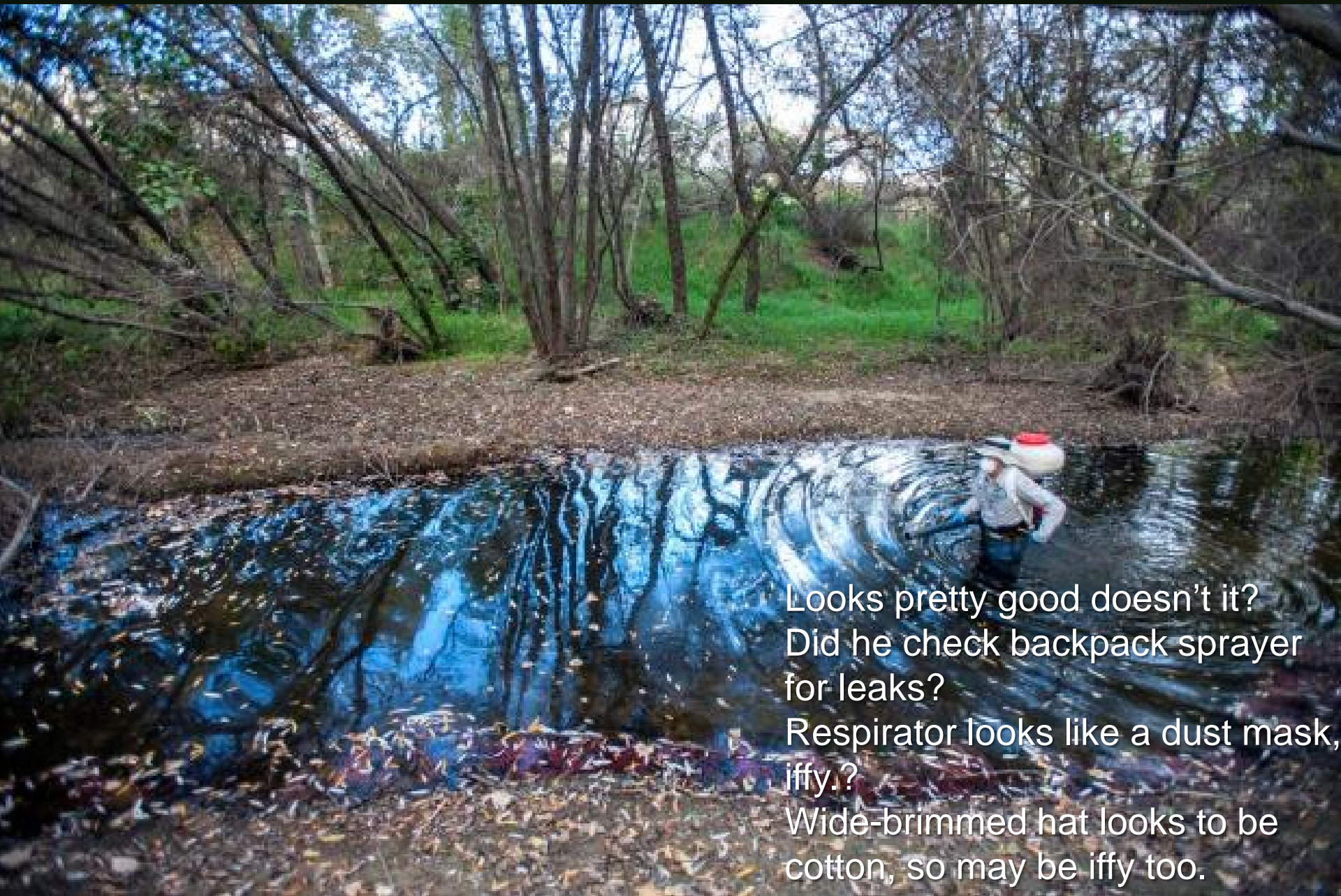
Will a dust mask suffice?
Glove cuffs turned up - better.
Straw hat with ventilation a NO!
Glasses—side & top shields?
Hearing protection?



Long sleeved shirt?
Eye protection, maybe not!
Brimmed hat?
Hearing protection, hard to
tell for sure?

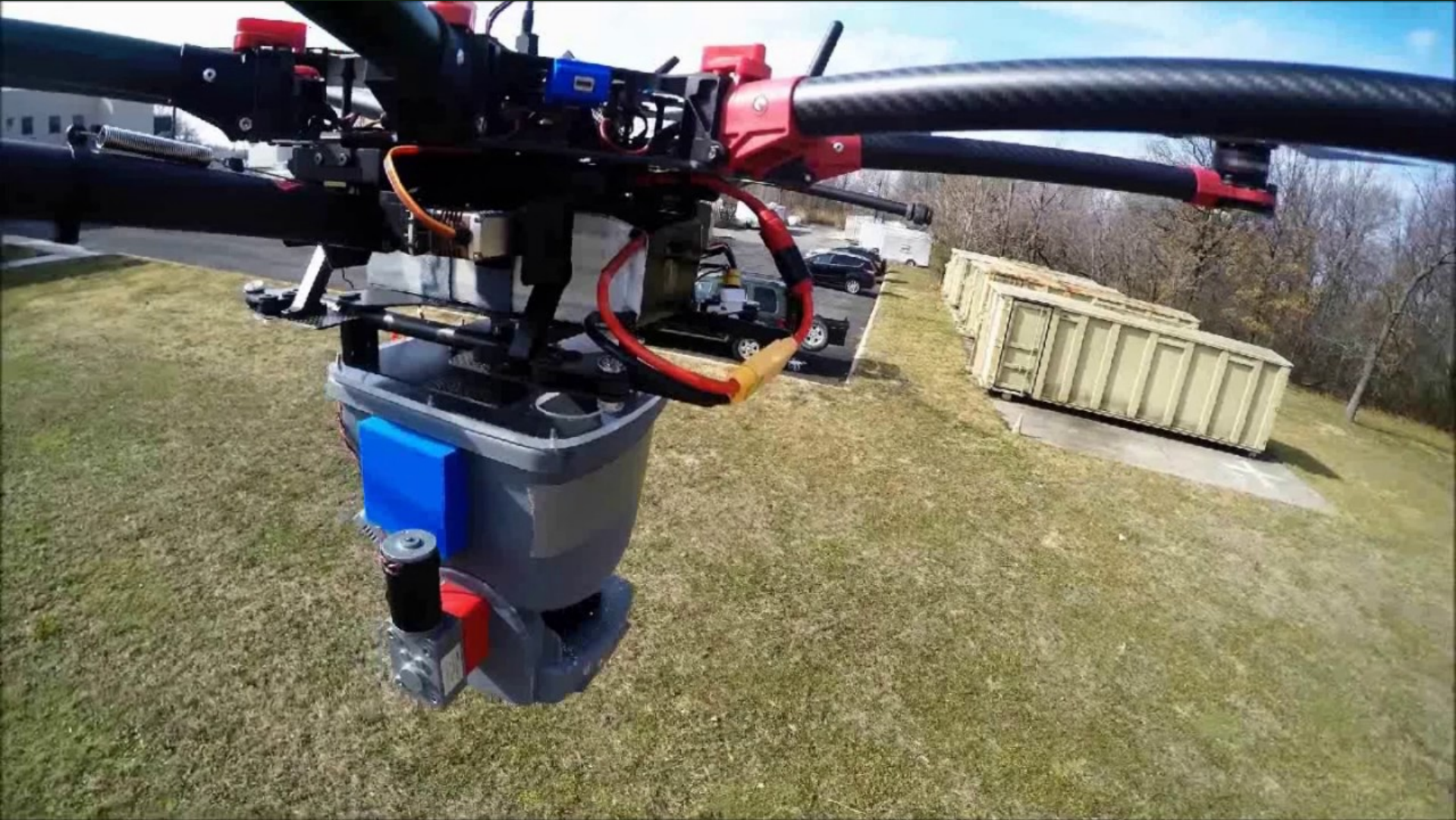


Looks pretty good doesn't it?
Tyvek pant legs outside boots.
Can't tell about eye protection
or respirator.
Gloves may be inside sleeves?



Looks pretty good doesn't it?
Did he check backpack sprayer
for leaks?
Respirator looks like a dust mask,
iffy?
Wide-brimmed hat looks to be
cotton, so may be iffy too.

Granule Applications



Now this is the way to avoid PPE mistakes!



This looks pretty good too! Assuming the pilot is wearing his required protection.



The wonders of *Bti*.





Is PPE required here?
Label defines all!

Is This How You Spray? Zika Response Miami



ddp USA/Rex/Shutterstock

'They use small doses at a time, but over several months that adds up. It depends on how long it will be sprayed. It could be for the rest of the year. If that is the case, we should be concerned about that.'

Michelle Harriott, science and regulatory director of a Washington-based NGO called Beyond Pesticides.

<http://www.dailymail.co.uk/health/article-3779056/Florida-politicians-urge-use-Intrexon-GM-mosquitoes-Zika.html#ixzz4K1qCyuHS>



Half-life is 30 minutes
- As published in *Science*

Any Questions?