

# Common Characteristics

- Can be a liquid or powder
- Successfully dispersed as aerosols when particle sizes are 1 to 5 microns
- Can be released from a “Line Source” or “Point Source”
- Weather is a key factor - Inversions are needed for successful aerosol delivery.
- May also be delivered orally through food or water contamination.

# Advantages of Bioweapons

- Small amount needed
  - Pathogens grow inside host
- Extremely toxic
  - Botox: Dot of an "i" kills 10
- Easy/inexpensive to grow
  - Cheese making equipment (viruses more difficult than bacteria / toxins)
- Large amount produced in short period of time
- Detection may be difficult:
  - Odorless, Colorless, Tasteless
- Potential for panic



# Disadvantages of Bioweapons

- Protection of Workers and Public
  - Release into environment
- Quality control
  - Particles must be aerosolized (1 micron or so)
- Delivery problems
  - Rain, wind, UV light
  - Bombs, bomblets, and shells produce poor, localized aerosols
  - Heat and shock waves (explosions) kill most organisms
- Poor storage survival
- Difficult to control release – “boomerang effects”
- Slow onset (except toxins)