**GEAPS**
**EXCHANGE**
KANSAS CITY • 2022

**Stay Connected!**
Download the "*GEAPS Exchange*" app for schedule, maps and surveys.

**Share on Social!**
**#GEAPSExchange**

Wifi Network: GEAPS2022   Password: Exchange92

**GEAPS**
**EXCHANGE**
KANSAS CITY • 2022

COPYRIGHT GEAPS EXCHANGE 2022

# Thank you to our Education Program Sponsors!

# PESTICIDE SAFETY

Protecting Your Associate Assets

# Perry Nettles

Ecolab, Specialty Pest Services

South Region Manager

# PESTICIDE SAFETY

Protecting Your Associate Assets

# PESTICIDE SAFETY

- Types of pesticides
- Label review
- Signal Words
  - Caution
  - Warning
  - Danger
  - Danger: Poison

# What is the definition of a pest?

## pest
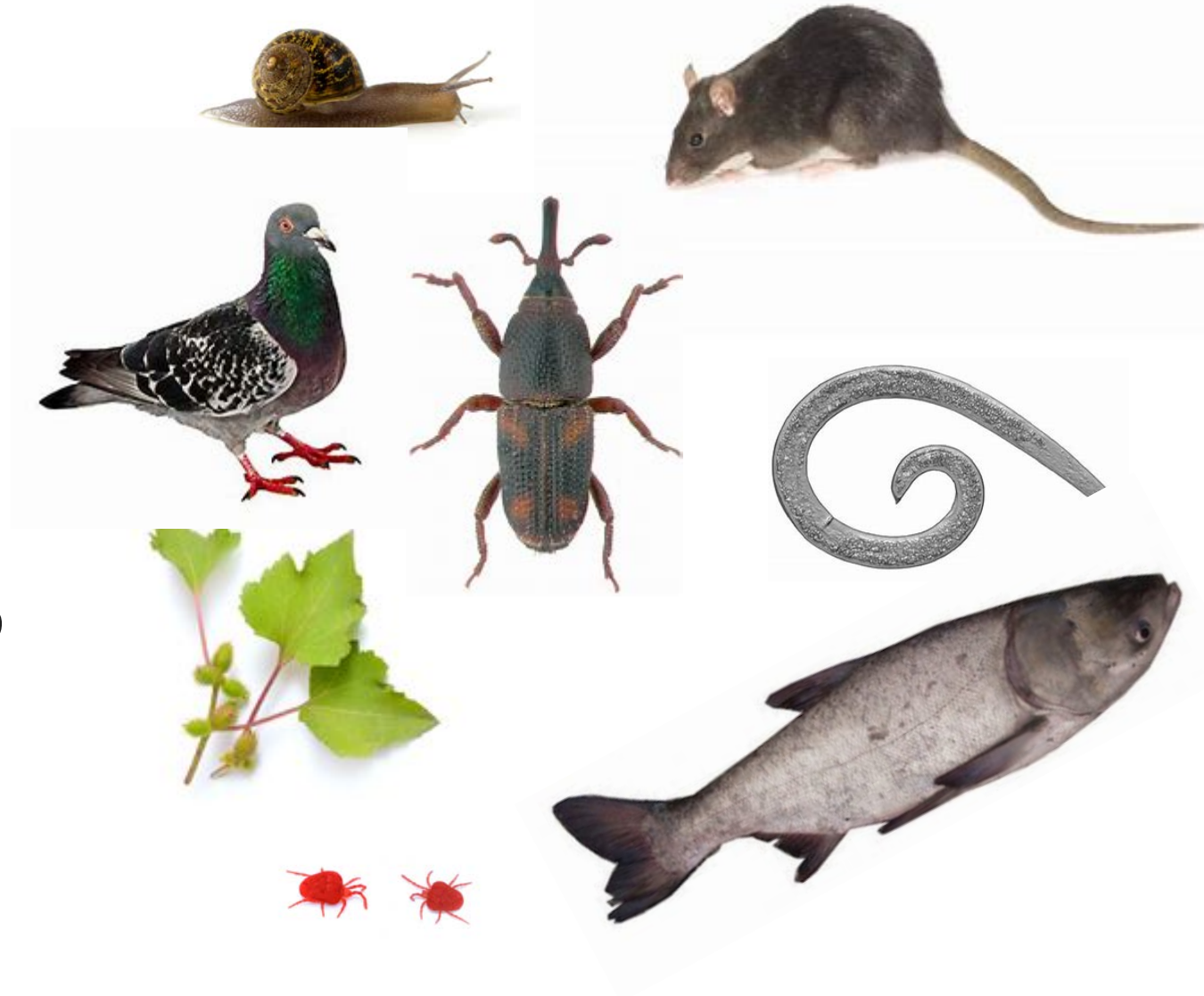[pest] 🔊

NOUN
*pests* (plural noun)

1. a destructive insect or other animal that attacks crops, food, livestock, etc..
   "the tomato plant attracts a pest called whitefly" · "an effective method for controlling insect pests" · "pest control"

2. *informal*
   an annoying person or thing; a nuisance.
   "he was a real pest"

Merriam-Webster

# But what does pest mean in our GEAPS world?

According to the Arkansas State Plant Board:

A pest is any organism that is detrimental to humans, destroys crops or structures, poses a threat to human health or livestock, or reduces aesthetic and recreational value

# What is the definition of a pesticide?

Pesticide active ingredients are described by the types of pests they control or how they work. People often use the term "pesticide" to refer only to insecticides, but it actually applies to all the substances used to control pests.

*Source: EPA.gov

- **Algicides** kill algae in lakes, canals, swimming pools, water tanks
- **Avicides** control bird populations
- **Biocides** kill microorganisms.
- **Fungicides** kill fungi (including blights, mildews, molds and rusts).
- **Herbicides** kill weeds and other plants that grow where they are not wanted.
- **Insect growth regulators** disrupt the molting, maturing from pupal stage to adult
- **Insecticides** kill insects and other arthropods.
- **Miticides** (also called acaricides) kill mites that feed on plants and animals.
- **Molluscicides** kill snails and slugs.
- **Nematicides** kill nematodes (microscopic, worm-like organisms that feed on plant roots)
- **Repellents** repel pests, including insects (such as mosquitoes) and birds.
- **Rodenticides** control mice, rats and other rodents
- **Termiticides** kill termites and other wood destroying insects

# LD50

- Lethal dose that causes death in 50% of animals tested

- Dose in milligrams of chemical to kilogram of body weight

- The lower the LD50 number, the more toxic the pesticide

- Does not reflect effects from long term exposure



Trying to decipher pesticide labels, LD50, PPE, dilution and application rates

**SIGNAL WORDS**

## TOXICITY CATEGORY (Signal Word)[2]

| | High Toxicity (DANGER/Danger-Poison) Category I | Moderate Toxicity (WARNING) Category II | Low Toxicity (CAUTION) Category III | Very Low Toxicity (Optional Signal Word = CAUTION) Category IV |
|---|---|---|---|---|
| Acute Oral $LD_{50}$ | Up to and including 50 mg/kg ($\leq$ 50 mg/kg) | Greater than 50 through 500 mg/kg (>50-500 mg/kg) | Greater than 500 through 5000 mg/kg (>500-5000 mg/kg) | Greater than 5000 mg/kg (>5000 mg/kg) |
| Inhalation $LC_{50}$ | Up to and including 0.05 mg/L ($\leq$0.05 mg/L) | Greater than 0.05 through 0.5 mg/L (>0.05-0.5 mg/L) | Greater than 0.5 through 2.0 mg/L (>0.5-2.0 mg/L) | Greater than 2.0 mg/L (>2.0 mg/L) |
| Dermal $LD_{50}$ | Up to and including 200 mg/kg ($\leq$200 mg/kg) | Greater than 200 through 2000 mg/kg (>200-2000 mg/kg) | Greater than 2000 through 5000 mg/kg (>2000-5000 mg/kg) | Greater than 5000 mg/kg (>5000 mg/kg) |
| Primary Eye Irritation | Corrosive (irreversible destruction of ocular tissue) or corneal involvement or irritation persisting for more than 21 days | Corneal involvement or other eye irritation clearing in 8 - 21 days | Corneal involvement or other eye irritation clearing in 7 days or less | Minimal effects clearing in less than 24 hours |
| Primary Skin Irritation | Corrosive (tissue destruction into the dermis and/or scarring) | Severe irritation at 72 hours (severe erythema or edema) | Moderate irritation at 72 hours (moderate erythema) | Mild or slight irritation at 72 hours (no irritation or erythema) |

# Caution

- Means the pesticide product is slightly toxic if eaten, absorbed through the skin, inhaled, or it causes slight eye or skin irritation

- Primarily OTC products

- Little to no training needed

# Warning

- Indicates the pesticide product is moderately toxic if eaten, absorbed through the skin, inhaled, or it causes moderate eye or skin irritation

- Farm & ag supply stores

- Again, no formal training needed

GEAPS EXCHANGE
KANSAS CITY • 2022

# Danger

- The pesticide is highly toxic by at least one route of exposure. It may be corrosive, causing irreversible damage to the skin or eyes.

- Alternatively, it may be highly toxic if eaten, absorbed through the skin or inhaled

# Danger: Poison

- Means that the pesticide product is highly toxic if inhaled. If this is the case, then the word "POISON" must also be included in red letters on the front panel of the product label

- Primarily related to, but not limited to, fumigants

# Fumigation Management Plan



- Preliminary Planning and Prep
  - Who, What, When, Where, How
- Personnel
- Monitoring
- Notification
- Sealing
- Application
- Post Application

# Fumigation Management Plan

## D. NOTIFICATION

1. Confirm the appropriate local authorities (fire departments, police departments, etc.) have been notified as per label instructions, local ordinances , or instructions of the client.

2. Prepare written procedure ("Emergency Response Plan") which contains explicit instructions, names, and telephone numbers so as to be able to notify local authorities if phosphine levels are exceeded in an area that could be dangerous to bystanders and or domestic animals.

# Emergency Responders

- **Make the emergency responders your best friends**
- **This could literally be the difference between life and death**
- **Annual site visits and cookouts**

# Perry Nettles

Ecolab, Specialty Pest Services

South Region Manager

**Booth # 1627**

| | |
|---|---|
| Perry Nettles | Johan Urhahn |
| Jack Jones | Jacob Henderson |
| Mike Ugolini | Alex Luce |
| Meg Carr | BJ Beems |