PennState Law

Center for Agricultural and Shale Law

PENNSYLVANIA DEPARTMENT OF AGRICULTURE AGRICULTURAL BUSINESS DEVELOPMENT CENTER

Understanding Agricultural Law Webinar Series

Understanding Agricultural Law

Webinar Series

Understanding the Basics of

Pesticides

September 22, 2023

Understanding Agricultural Law

A Legal Educational Series for General Practice Attorneys and Business Advisors Representing Agricultural and Rural Clients

This webinar series is specifically tailored to create subject matter literacy and competence on fundamental issues of agricultural law for attorneys, advisors, and service providers to agricultural producers and agri-businesses.

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Past Topics:

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- Leasing Farmland for Energy Development
- Local Land Use Regulation of Agriculture
- Statutory Protections for Ag Operations
- Agricultural Cooperatives
- Livestock Market Regulation
- Crop Insurance
- Federal & State Conservation Programs
- Licensing & Regulation of Direct Agricultural Product Sales
- Agricultural Finance
- PA's “Clean & Green” Tax Assessment Program
- Animal Confinement Laws
- Conservation Easements
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Upcoming Topics:

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Housekeeping

- This webinar is being recorded.
- Please Use the **Q&A feature** for questions.
- Please fill out surveys.
- **CLE/PDA Pesticide Applicator credits:**
  - Links to **separate forms** will be posted in the **chat**
  - Please fill out form ASAP
  - Listen for **code word**, enter code word in **form**

Understanding the Basics of **Pesticides**

- This webinar will provide an overview of a range of regulatory and legal aspects within the pesticide field, covering fundamental concepts, such as **pesticide definitions, types, uses,** and **potential adverse effects**.
- We will also discuss ***pesticide product registration and labeling, pesticide certification and licensing requirements,*** and the ***worker protection standards.***
- Additionally, we will provide an overview of the legal considerations and **tort protection** associated with the issue of **pesticide drift**.

Pesticides—What is a pest?

- The Code of Federal Regulations (CFR) provides a definition for pests in Title 40, Chapter I, Section 152.5. Pests include **insects, rodents, nematodes, fungus, and weeds**. It also includes **vertebrate or invertebrate animals, plants, viruses, plants, viruses, bacteria, and other microorganisms**.

- Pests do **not** include viruses, bacteria, or microorganisms *that are on or inside of a human or other animal.*

- Pests ≠ Human or animal diseases.

Pesticides—What is a pesticide?

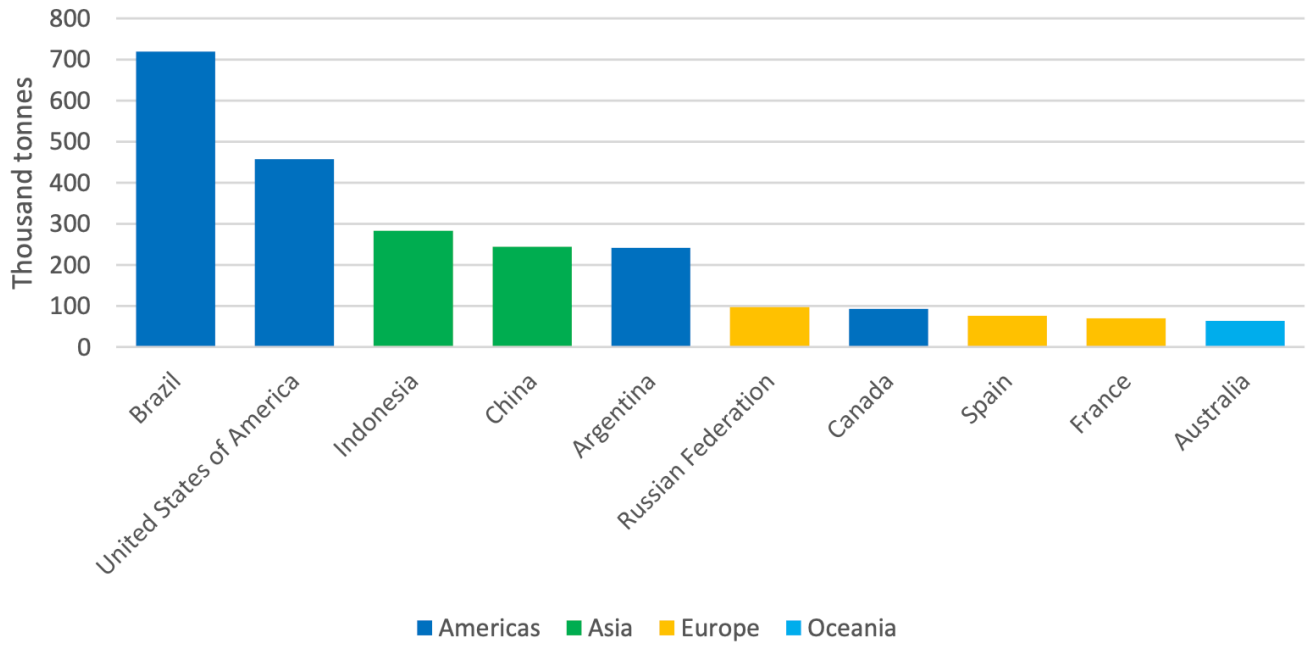
- The Code of Federal Regulations (CFR) provides a definition for pesticides in Title 40, Chapter I, Section 152.3.
- Pesticide is a generic term including a diverse range of chemicals and compounds used for pest control purposes. Multiple categories of pesticides exist, **each with distinct mechanisms of action against their target pests.**
- Pesticide categories: defoliants, desiccants, plant growth regulators, insecticides, herbicides, fungicides, rodenticides, bactericides.
- Pesticides – General use v. Restricted use
  - **General-use pesticide** are available to the public without licensing. Typically, they do not pose significant adverse effects on human health or the environment.
  - **Restricted-use pesticide** are not accessible to the public. They have the potential to cause harm to people or the environment and require certification or licensing for handling and application.

Pesticide Data

- **Global pesticide consumption in agriculture** reached **3.53 million metric tons in 2021**, a 4% increase compared to 2020.
- The Americas imported the most pesticides from other parts of the world, totaling 1.2 million tons valued at $7.6 billion.
- Among all regions, the Americas experienced the second highest growth in pesticide in agriculture between 1990 and 2021, with a substantial increase of 191%. Oceania had the fastest growth with an increase of 206%.
- In 2021, Brazil ranked first globally in pesticide usage, with 719.21 thousand metric tons used. The **United States** was the **second-largest consumer**, with **457.39 thousand metric tons**.
- The United States uses about **1 billion pounds of pesticide annually in agriculture**. Recent data highlights **corn, soybeans, cotton, wheat and potatoes** as the major crops driving pesticide usage.
- According to APPRIL, there are currently over 33,000 registered pesticide products approved for use in the United States (updated as of 9.21.23)

Pesticide Data

Figure 8: Pesticides use, top countries (2021)



Source: FAO. 2023. Pesticides Use. In: *FAOSTAT*. Rome. [Cited July 2023]. http://www.fao.org/faostat/en/#data/RP

Pesticides—Understanding the Potential Harmful Impacts

Potential harmful effects of using pesticides in agriculture:

- **Human health impacts**
  - Acute toxicity may lead to immediate health issues in humans, e.g., nausea and vomiting, headache, skin irritation.
  - Linkages to chronic health problems like cancer, neurological disorders, and reproductive issues.
- **Impacts on non-target organisms**
  - Research indicates a correlation between pesticide use and declining biodiversity.
- **Environmental contamination**
  - Residues can enter the environment through air, water, or soil affecting ecosystems.
  - Widespread contamination—pesticides can travel long distances.

Pesticides Laws and Regulations

- The **Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)**—requires EPA to regulate the distribution, sale, and use of pesticides. It also requires EPA registration for all pesticides before they are sold or distributed in the U.S.
- The **Federal Food, Drug, and Cosmetic Act (FFDCA)**—requires EPA to set a pesticide residue tolerance.
- The **Food Quality Protection Act (FQPA)**—established a new standard of a **"reasonable certainty of no harm"** from pesticide exposure.
- The **Endangered Species Act (ESA)**—requires EPA to make sure that pesticides do not harm endangered or threatened species.
- The **Clean Water Act (CWA)**—regulates the discharges of pesticides into water bodies.

Many states also have their own laws and regulations governing the use of pesticides.

Pesticide Product Registration

- Under FIFRA, pesticides must be registered with the EPA before they can be sold or distributed in the United States (40 CFR Part 152).
- The pesticide registration application must include the following components:
  - **Identity of the applicant** (name, address, authorized agent, company number)
  - **Summary of the application** (list of data submitted, brief description of the results obtained from all tests conducted)
  - **Draft labeling** (claims, ingredients statement, warnings, precautionary statement, and directions for use)
  - And **all applicable data supporting** the registration application.
- Applicants must demonstrate to the EPA that the pesticide product will **perform its intended function without unreasonable risks to public health or the environment.**

Pesticide Product Registration

FIFRA authorizes different types of registration:

- **Unconditional registration** (40 CFR Part 152.112)
  - Granted (1) if all scientific data and administrative requirements and (2) the use of the pesticide product will not cause unreasonable adverse effects on public health and/or the environment.
- **Conditional registration** (40 CFR Part 152.114)
  - Granted if all administrative requirements have been met but available data is lacking, **provided that the applicant provides any missing or additional data by the end of the conditional registration period** and (2) if the use of the pesticide product will not cause unreasonable adverse effects on public health and/or the environment.
- **Supplemental registration** (40 CFR Part 152.132)
  - Allows manufacturing companies to distribute and sell their registered product using another company or supplier's name and address information.

Pesticide Product Registration

- Pesticide registrations **must be renewed every 15 years.**
  - EPA must evaluate registered pesticide products for **new public health or environmental risks**

- Registration cancellation process
  - If no renewable request is received 30 days before registration expiration, EPA must publish a cancellation notice in the Federal Register.
  - Manufacturers have 30 days to challenge the proposed cancellation.

Pesticide Product Registration—*State Registration*

- States can register an **additional use** of an existing pesticide product to address their **local needs**, e.g., agricultural, environmental, or public health need, under FIFRA Section 24(c).
- States can limit pesticide use on federal labels only through laws or rulemaking process under FIFRA Section 24(a).

"FIFRA section 24(c) allows states to register 'additional uses of federally registered pesticides' to meet special local needs within the state, but it does not provide for states to issue more restrictive registrations. A separate provision under FIFRA—section 24(a)—is the appropriate authority for the states to rely on in the event that they want to establish a measure that restricts or narrows the uses authorized by an EPA-approved label."

EPA Guidance on FIFRA 24(c) Registrations (issued in November 2020).

State Primary Enforcement Responsibility

- States have **delegated authority** to enforce federal regulations of pesticides within their borders.
  - States may **monitor** the use of pesticides within their borders and **enforce** compliance with federal pesticide regulations.
- States must develop a pesticide program, including specific key elements:
  - Pesticide label requirements
  - Worker protection standards
  - Pesticide applicator certification and training
  - Recordkeeping
- Federal laws control pesticide labels
  - States must adhere to minimum federal standards. Should a state fail to meet minimum federal requirements, EPA may withdraw the state's primacy to regulate pesticide use.
  - State pesticide regulations can be stricter than the federal requirements.
  - States cannot impose labeling requirements that are different from those mandated under FIFRA.

Pesticide Label Requirements

- Understanding the pesticide label—pesticide labels are **legal binding documents** for safe and effective use of a pesticide.
- The pesticide label includes key information such as:
  - Product name and brand
  - EPA registration number
  - Active ingredients statement
  - Signal words
  - Precautionary statements
  - First aid instructions
  - Directions for use
  - Storage and disposal instructions
- Any deviation from the label requirements constitutes a violation of FIFRA and relevant state law.

Pesticide Applicator Certification and Licensing

- **Certification under FIFRA** (40 CFR Part 171)
  - Required for those who apply or supervise restricted-use pesticides (RUPs)
  - Restricted-use pesticides (RUPs) are more hazardous than general-use pesticides and require specific training and certification for safe and effective use.
- **Private pesticide applicator certification** (40 CFR 171.105)
  - Required for individuals applying RUPs on their owned or leased land for agricultural production
  - Includes farmers and their employees
- **Commercial pesticide applicator certification** (40 CFR 171.103)
  - Mandatory for individuals applying RUPs on properties other than their own, for compensation.

Pesticide Applicator Certification and Licensing

- **Private applicators** (40 CFR 171.105)
  - Requirements:
    - Minimum age of 18
    - Successful completion of a written examination
  - Core knowledge of "the principles and practices of pest control associated with the production of agricultural commodities and effective use of restricted use pesticides."
- **Commercial pesticide applicator certification** (40 CFR 171.103)
  - Requirements:
    - Minimum age of 18
    - Successful completion of a written examination
  - Core knowledge + category knowledge—commercial applicators must also demonstrate expertise in one or more specific pesticide application categories (e.g., agricultural pest control, forest pest control, etc.)

State Certification and Licensing

- States can certify private and commercial pesticide applicators under EPA-approved plans
- States must meet or exceed EPA standards and may add specific certification requirements
- Continuing education may be necessary to maintain certification in some states.

- Pennsylvania Pesticide Certification Plan
  - The PA Department of Agriculture (PDA) administers the pesticide certification program
  - Special permit for private applicators—private applicators using restricted-use fumigants must obtain a specific permit for fumigation (7 Pa. Code § 128.64)
  - There are 26 distinct categories available for commercial applicators (7 Pa. Code § 128.42)
  - All applicators must maintain certification by completing CEU training every three years.

Pesticide Worker Protection Standards–Overview

- In 1992, the U.S. Environmental Protection Agency (EPA) established the Worker Protection Standard (WPS) to protect workers exposed to pesticides
  - EPA updated the WPS regulations in 2015 to enhance safety measures.
- **Pesticide Safety Training**
  - Under WPS, employers must provide safety training covering:
    - Understanding pesticide labels
    - Safe pesticide handling
    - Proper use of Personal Protective Equipment (PPE)
    - Hazard recognition
- **Pesticide Safety Training Requirements**
  - Both agricultural workers and pesticide applicators must receive annual EPA-approved WPS training.
  - Training also applies before entering areas with recent pesticide use or Restricted Entry Intervals (REIs)

Pesticide Worker Protection Standards–Overview

- **Pesticide Safety Information**
  - Under WPS, employers must provide accessible pesticide information during work hours
    - This include Safety Data Sheets (SDS) hazard data, emergency medical facility details, and regulatory agency contacts.
  - Pesticide application details
    - Employers must display pesticide specifics, such as treated area, pesticide names, EPA registration numbers, application dates, and REI duration.
    - Posting must occur within 24 hours of application, with records maintained for two years.
- **Personal Protective Equipment (PPE)**
  - Under WPS, employers are responsible for supplying employees with PPE, including gloves, coveralls, protective eyewear, etc.
  - Pesticide applicators must have a separate area for personal clothing.

Pesticide Worker Protection Standards–Overview

- **Decontamination supplies**
  - Under WPS, employers must ensure decontamination supplies are within a quarter-mile of the work area.
  - Supplies include soap, disposable towels, water, and fresh clothing.
- **WPS Violations**
  - Employers who violate WPS may face penalties, including warnings, civil and criminal charges.
  - Injured workers due to pesticide exposure can pursue worker's compensation claims against their employers.

Check out the Pesticide Educational Resources Collaborative for more information and training materials.

Pesticide—Application Exclusion Zone (AEZ)

- In November 2015, EPA updated the Worked Protection Standard (WPS) and introduced Application Exclusion Zone (AEZ) requirements (40 CFR 170.405)
  - AEZ is a designated no-entry area around the pesticide application site.
  - AEZ ensures **protection from pesticide drift during and after application**.
  - AEZ size varies from 100-foot to 25-foot buffer zone, depending on the application method.
- In December 2020, EPA narrowed the AEZ scope to agricultural employer's property only, excluding people on neighboring properties.
  - Federal district court issued a stay on the rule's implementation (*State of New York, et al. v. U.S. EPA, et al.,* USDC S.D. New York, 1:20-cv-10642)
- In March 2023, EPA proposed reinstating the 2015 AEZ provisions.
  - Public comment period ended May 12, 2023.
  - Stay tuned!

Pesticide Tolerances

- Pesticide tolerances are maximum allowable levels of pesticide residues on food, established by the U.S. EPA under the Federal Food, Drug, and Cosmetic Act (FDCA) (40 CFR Part 180)
- **Pesticide tolerances are set for both the individual pesticide and raw agricultural commodity**.
  - A particular pesticide may have different tolerances on different commodities
  - A particular commodity may have different tolerances set for different pesticides.
- EPA must determine that current and proposed uses of pesticide products meet the standard of "reasonable certainty of no harm."
- EPA must assess factors such as potential effects on infants and children, aggregate exposure (from food, water, and residential sources), and cumulative exposure (considering the toxicity of the entire pesticide family).
- **Proper pesticide application should keep residues below tolerance levels**, and foods exceeding these limits cannot be sold in interstate commerce.

Pesticide Drift and Tort Actions

Pesticide drift is one of the most common reported issue in the agricultural community and pesticide applicators/manufacturers can be sued when the chemical they are applying is found off-site.

- As a farmer, pesticide applicator, or pesticide manufacturer you may be held liable for pesticide drift on non-target areas.

Pesticide Applicator Legal Liability

- There are four main tort legal theories under which lawsuits can be filed against pesticide applicators for damages:
  - **Strict liability**;
  - **Trespass**;
  - **Nuisance**; and
  - **Negligence**.

- Negligence is the most used theory in pesticide lawsuits.

Pesticide Applicator Legal Liability—*Strict Liability*

- **Strict Liability** holds individuals responsible for damages arising from **inherently/abnormally dangerous activities,** regardless of negligence of intent.
  - Whether pesticide application qualifies as an ultrahazardous activity is a crucial question and vary by state and jurisdiction.
- **Examples of court rulings:**
  - Pesticide application at home was not an ultrahazardous activity in *Villari v. Terminix Int'l, Inc.* (663 F. Supp. 727, E.D. Pa. 1987).
  - Pesticide spraying was not considered ultrahazardous in *June v. Laris,* 618 N.Y.S.2d 138 (App Div., 3d Dept 1994)
  - Pesticide spraying should not be considered an ultrahazardous activity in *Bennett v. Larson Co.,* 118 Wis. 2d 681, 348 N.W.2d 540 (1984)
  - Crop dusting is an ultrahazardous activity in *Loe v. Lenhardt,* 227 Or. 242, 362 P.2d 312 (1961)

Pesticide Applicator Legal Liability—*Trespass*

- **Trespass** involves **intentional and physical intrusion** upon another person or their property, including the introduction of a tangible object without permission, **interfering** with the owner's **exclusive possession** of the property.
  - Pesticide drift may raise trespass concerns when pesticide molecules reach neighboring properties; however, the challenge lies in defining these molecules as tangible objects.
- **Examples of court rulings:**
  - The Minnesota Supreme Court ruled that "trespass requires invasion by tangible matter," dismissing a pesticide drift trespass claim due to particulate nature of pesticide in *Johnson v. Paynesville Farmers Union Coop. Oil Co.* (817 N.W.2d 693, 701; Minn. 2012).
  - Colorado state district court found pesticide spray drift constituted trespass, even without actual harm, because plaintiff had directly felt the effects of spray residue in *Macalpine v. Hopper,* No. 10CV220 (Colo. Dist. Ct., Delta Cnty, July 5, 2012)

Pesticide Applicator Legal Liability—*Nuisance*

- **Nuisance** is an **interference** with another person's **use and enjoyment** of their property.
- **Examples of court rulings:**
  - The Minnesota Supreme Court recognized nuisance claims for intangible intrusions, citing particulate matter release as a possible cause of land use disruption in *Johnson v. Paynesville Farmers Union Coop. Oil Co.,* 817 N.W.2d 693, 701 (Minn. 2012).

Pesticide Applicator Legal Liability—*Negligence*

- **Negligence** is the failure to act with reasonable care, and that failure causes harm to another.
  - Negligence is the primary tort legal theory used in pesticide lawsuits. Trespass, nuisance, and strict liability are considered "tack-on claims."
- Under the negligence theory, you must prove the following elements:
  - Duty of care, i.e., duty to follow the label instructions.
  - Breach of duty, i.e., did the pesticide applicator fail to act in a reasonable manner to prevent damage from the pesticide?
  - Proximate causation, i.e., whether the injury is the reasonably foreseeable result of the pesticide applicator's misconduct or misuse.
  - Actual damages, i.e., was there a value that was damaged?

Manufacturer Applicator Legal Liability—*Product Liability*

- Injured parties can file product liability claims against pesticide manufacturers, distributors or sellers for damages resulting from pesticide drift.
  - In pesticide drift cases, product liability claims are generally associated with negligence claims.
- To succeed in a product liability claim, you must prove:
  - Injury during pesticide use
  - Negligence from the part of the manufacturer/distributor/seller, by establishing either:
    - A **design defect** in the entire product line that makes it unreasonably dangerous to the consumer for the intended use.
    - A **manufacturing defect** in an individual product that makes it unreasonably dangerous to the consumer
    - A **failure to warn** the consumer about any risks associated with the use of the pesticide product.

Manufacturer Applicator Legal Liability—*Case Study*

- **Bader Farms, Inc. v. BASF Corporation** (USDC E.D. Missouri, No. 1:16-cv-200; Eighth Cir., No. 20-3663)
  - **Background:**
    - Peach farmer in Southeast Missouri filed a lawsuit against Monsanto and BASF Corporation.
    - Sought compensation for crop and peach tree damage due to pesticide drift.
  - **Allegations:**
    - Companies were negligent and violated product liability laws
    - Flawed crop system caused extensive farmland damage
    - Lack of suitable herbicide for genetically modified soybean and cotton seeds.
  - **Verdict:**
    - Federal district court awarded $15 million in compensatory damages and $60 million in punitive damages against Monsanto and BASF Corporation
  - **Appeal and outcome:**
    - Companies appealed, but the Eighth Circuit Court affirmed the verdict in 2022

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Thank You!

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