UNIT V - SAFETY, ENVIRONMENT, AND LEGAL ISSUES

Lesson 3: Knowing the Law

**Competency/Objective:** Identify the legal issues involved with crop production.

**Study Questions**

1. What are the legal requirements for handling chemicals, wastes, and equipment?
2. What are the legal liabilities if chemicals, wastes, or equipment is mishandled?
3. What is a legal land description?
4. What are the legal liabilities for crossing property lines, fencing, or other damage?
5. What are the legal liabilities of polluting streams and groundwater?

**References:**

1. *Advanced Crop Science* (Student Reference). University of Missouri-Columbia: Instructional Materials Laboratory, 2000, Unit V.


3. Transparency Masters
   a) TM 3.1: Base Line and Principal Meridian Affecting Missouri Land Descriptions
   b) TM 3.2: Locating a Township
   c) TM 3.3: Section Location in a Township
   d) TM 3.4: Divisions of a Section of Land

4. Activity Sheet
   a) AS 3.1: Legal Land Descriptions
UNIT V - SAFETY, ENVIRONMENT, AND LEGAL ISSUES

Lesson 3: Knowing the Law

TEACHING PROCEDURES

A. **Review**

   Our previous lesson discussed some of the problems affecting the environment that may involve crop producers, some management procedures that may reduce the environmental impact of those problems, and governmental agencies that are involved with regulating and enforcing environmental laws that may be related to agricultural practices. This lesson will continue with information concerning legal responsibilities of crop producers relating to those issues.

B. **Motivation**

   Ask students if they have witnessed a chemical spill. If so, what actions were taken to correct the problem? You may also ask them if they know the consequences of improperly handling pesticides.

C. **Assignment**

D. **Supervised Study**

E. **Discussion**

   1. Crop producers must be knowledgeable of legal requirements they must follow when working with chemicals used in agricultural production. They should also be familiar with the training required for the applicators of agricultural chemicals.

   **What are the legal requirements for handling chemicals, wastes, and equipment?**

   a) Producers must make sure pesticides are handled properly and safely.
   b) Federal laws set the standards for pesticide use. State laws may be more strict but not more lax.
   c) The Environmental Protection Agency (EPA) regulates the use of pesticides.
   d) Regulations are mandated under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).
   e) Under FIFRA, key provisions are as follows.
      1) Requires the EPA to register all pesticides, each use of all pesticides, and approve the product label
      2) Requires the classification of all registered pesticides as either general use or restricted use
      3) Requires pesticides to be used only as directed on the labeling
      4) Requires users of restricted use pesticides to be certified applicators or work under the direct supervision of a certified applicator
      5) Provides penalties for actions contrary to its provisions
      6) Gives the EPA authority to develop regulations, which are interpretations of the law and have the force of law
   f) The Missouri Pesticide Registration Act and the Missouri Pesticide Use Act bring Missouri into compliance with FIFRA.
   g) These Acts are administered by the Division of Plant Industries-Bureau of Pesticide Control of the Missouri Department of Agriculture.
   h) Chapter 281 of the Missouri State Statutes establishes requirements for persons to apply restricted use pesticides in Missouri.
Applicators of pesticides in Missouri receive training in the following areas.
1) Applicable state and federal pesticide laws and regulations
2) Pests
3) Pest control (application techniques and IPM training)
4) Pesticides
5) Pesticide waste
6) Applicator safety and worker protection
7) Groundwater protection
8) Endangered species protection
9) New developments

Training must be repeated for recertification every 5 years.

2. Penalties are assessed or given to persons who violate rules and regulations governing the use of agricultural chemicals. Sometimes these can be quite severe. Producers should know the consequences of violations.

What are the legal liabilities if chemicals, wastes, or equipment is mishandled?

a) Civil penalties may be imposed if FIFRA regulations are broken.
b) These may be as much as $5,000 for commercial applicators and up to $1,000 for private applicators.
c) Hearings are held before the EPA can assess a fine.
d) Criminal penalties may be as much as $25,000 or 1 year in prison for commercial applicators or $1,000 and/or 30 days in prison for private applicators.
e) All major spills must be reported to the USEPA officer in Kansas City with the following information included:
   1) Name, address, and telephone number of person reporting
   2) Exact location of the spill
   3) Name of the company involved and locations
   4) Specific pesticide spilled
   5) Estimated quantity of pesticide spilled
   6) Source of the spill
   7) Cause of the spill
   8) Name of body of water involved or nearest body of water to the spill area
   9) Action taken for containment and cleanup.
f) Many pesticide labels have emergency telephone numbers for direct access to the manufacturer to manage emergencies for a given product.
g) If a spill is on a highway, the highway patrol or the highway department must be contacted.
h) If a spill is on a city or county road, the sheriff, police, or the local country or city fire department must be contacted to assist with the cleanup.

3. Ownership or location of parcels of land are indicated by a legal land description. This method is explained in this section of the lesson. Use TM 1, TM 2, TM 3, and TM 4 to aid you in this instruction.

What is a legal land description?

a) Locations are indicated in the United States by two methods.
   1) Indiscriminate metes and bounds system that uses natural land features such as trees, streams, neighboring land owners, and distances to describe plots of land
   2) Township-Range system
b) Township-range system has the following associated terms that must be defined.
   1) Base line - reference or beginning point for measuring north or south townships
   2) Principal meridian - reference or beginning point for measuring east or west ranges

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3) Township lines - east to west lines that mark township boundaries
4) Range lines - north to south lines that mark township boundaries
5) Range - assigned to a township by measuring east or west of a principal meridian
6) Township - 36 sections of land arranged in a 6 x 6 array, measuring 6 miles by 6 miles; sections numbered beginning with the northeast-most section, proceeding west to 6, then south along the west edge of the township and to the east
7) Section - basic unit of the system; a square tract of land - 1 mile by 1 mile, containing 640 acres

c) Principal meridian and base line are used to indicate parcels of land in Missouri on the transparency.
d) Use the other three transparencies to explain the township location, the section location, and a specified portion of a section.
e) These legal descriptions are attached to abstracts to verify and indicate ownership of parcels of land in Missouri.

4. To prevent disputes among neighbors, property owners should understand their legal responsibilities regarding property lines and fences that mark divisions of land.

**What are the legal liabilities for crossing property lines, fencing, or other damage?**

a) Answers to disputes concerning fencing duties and boundary locations are supplied by Missouri State Statues and court decisions.
b) The solution to these disputes lies with the cooperative attitudes of neighboring owners.
c) There is no substitute for an attorney's skill and advice to help solve differences.
d) Crop producers are encouraged to contact their state representatives and senators with boundary law recommendations.
e) Most disputes occur when damage is caused on adjoining property.
f) Agricultural property owners in Missouri should obtain and read UMC Extension Guide G810 *Missouri Fencing and Boundary Laws*. This gives information on fencing laws, duties, and liabilities of livestock owners, the definition, building, and maintenance of "divisional" fences.

5. Discuss liabilities of polluting streams and groundwater.

**What are the legal liabilities of polluting streams and groundwater?**

a) Protection of surface and groundwater is receiving a great deal of attention as the scope of contamination is increasing.
b) The United States relies on ground and surface water for more than 50% of its drinking water and more than 25% of its fresh water needs.
c) EPA estimates that 1% of the nation's groundwater supply is already contaminated, and the percentage is rapidly increasing.
d) A major source of this contamination is the use and misuse of pesticides and fertilizers.
e) Polluted groundwater may contaminate wells and therefore contaminate drinking water for farmers, their families, and their livestock.
f) Pollution of streams and groundwater is from two basic sources.
   1) Point sources - traced back to a specific source of the pollution, such as a chemical spill
   2) Nonpoint sources - not traceable to a specific source, such as chemical runoff from fields

g) Misuse of chemicals can degrade water sources in several ways.
   1) Irrigation backflow - where chemicals are mixed with irrigation water; installation of backflow valves is a preventative measure
   2) Overapplication of chemicals - excess chemicals leach or percolate into water table
3) Runoff - pollutes streams; may flow across neighbors property and into larger streams or rivers
4) Highly soluble nitrates - leach into groundwater; is an ever-increasing problem in Midwest
5) Improper disposal of containers - some pesticide labels - distances from wells for safe mixing and loading of pesticides

h) Adherence to pesticide's label such as using the proper dosage can help reduce contamination.
i) Harsh legal judgments, especially for liability and negligence, are being assessed against polluters.
j) Civil violations are based on the fact that the violation occurred and do not require the element of intent or negligence. Violators might receive a fine of up to $10,000 per day.
k) Criminal violations are given when negligence or intent is established. There may be fines of up to $25,000 per day and possible imprisonment of 2 years.
l) Chapter 644 of the Missouri State Statutes may be used as a reference regarding stream and groundwater pollution.

F. Other Activities

1. Have someone from the local fire department as a guest speaker to discuss reporting and cleanup procedures in your area.

2. Secure a county plat book and have students locate their farms or the farms of friends or relatives.

G. Conclusion

There are several legal issues that must be addressed in regards to the use of agricultural chemicals. We must be aware that the EPA is responsible for administering the Federal Insecticide, Fungicide, and Rodenticide Act and may also be involved with assessing penalties and/or fines when a problem occurs. Crops producers must know the proper procedures used to report a chemical spill and what information needs to be given to the authorities. Land in Missouri is legally described by using the township-range method of indicating its location. The two sources of pollution are point sources such as a chemical spill, and nonpoint sources such as fertilizer run-off from fields. These problems may also involve a civil or criminal penalty.

H. Answers to Activity Sheet

1. b
2. c
3. c
4. d
5. c
6. a

I. Answers to Evaluation

1. b
2. b
3. a
4. d
5. Federal Insecticide, Fungicide, and Rodenticide Act
6. Point sources - can be traced to a specific source such as a chemical spill.
Nonpoint sources - cannot be traced to a specific source such as fertilizer run-off from fields.
EVALUATION

Circle the letter that corresponds to the best answer.

1. What governmental agency regulates the use of pesticides?
   a. Food and Drug Administration
   b. Environmental Protection Agency
   c. United States Department of Agriculture
   d. Department of Natural Resources

2. How many sections of land are in a township?
   a. 24
   b. 36
   c. 48
   d. 52

3. What percent of the nation's groundwater is said to be contaminated?
   a. 1%
   b. 3%
   c. 10%
   d. 50%

4. Restricted use chemical applicators must recertify every _____ years.
   a. 2
   b. 3
   c. 4
   d. 5

Complete the following short answer questions.

5. What is the name of the Act that requires the regulation of pesticides?

6. List and define the two types of pollution sources for surface and groundwater contamination.
   a. 
   b. 
Base Line and Principal Meridian Affecting Missouri Land Descriptions
Locating a Township

Fifth Principal Meridian

Range Line

Base Line

Township Line

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## Section Location in a Township

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## Divisions of a Section of Land

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Legal Land Descriptions

Objective: Students will identify and describe parcels of land using the Township-Range system of legal land descriptions.

Directions: Examine Figure A on the next page and answer the questions below.

1. The 6-mile strips of land that run north and south parallel to the principal meridian are called_____________.
   a. Ranges
   b. Townships
   c. Base lines
   d. Plat areas

2. __________ is the township and range description for the selected township in Figure A.
   a. T2E, R3N
   b. T3N, R3E
   c. T3N, R2E
   d. T2E, R2N

3. There are _______ sections in a township.
   a. 12
   b. 24
   c. 36
   d. 48

4. There are _______ acres in a section.
   a. 180
   b. 360
   c. 480
   d. 640

5. What is the legal description of the land tract indicated (darkened) in Figure A?
   a. NE ¼ of NW ½ of Section 12, T2N, R3E
   b. SW ½ of NE ¼ of Section 24, T3N, R2E
   c. NW ¼ of NE ¼ of Section 24, T3N, R2E
   d. NW ¼ of NE ½ of Section 24, T2E, R3N

6. How many acres would be in the indicated (darkened) area of Figure A?
   a. 40
   b. 80
   c. 120
   d. 160
Figure A - Township and Range Locations

Principal Meridian

Base Line